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The Neotropical Orb-weaver Genera  
*Chrysometa* and *Homalometa*  
(Araneae: Tetragnathidae)

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# THE NEOTROPICAL ORB-WEAVER GENERA *CHRYSOMETA* AND *HOMALOMETA* (ARANEAE: TETRAGNATHIDAE)

HERBERT W. LEVI<sup>1</sup>

**ABSTRACT.** *Chrysometa* and *Homalometa* are neotropical members of the family Tetragnathidae. Tetragnathidae are separated from Araneidae by the configuration of the male palpal parts, the large tarsal organ on the cymbium and the cone-shaped palpal tibia. The female epigynum is flat rather than three-dimensional, often with complicated internal ducts; or rarely, the epigynum is absent. The abdomen's integument is often underlain by evenly sized white or silver spots. Relative to body size, males have longer chelicerae than females. Tetragnathid males when mating hold females some distance from themselves. In many species the femoral-patellar joint is extended in resting position.

There are 127 known species of *Chrysometa*, 94 of them new; there are three species of *Homalometa*, two of which are new. Most *Chrysometa* species occur at high altitudes in the Andes and in paramos (both poorly collected areas); only a few species are known from low elevation rain forests.

## INTRODUCTION

The study of *Chrysometa* was triggered by numerous inquiries from ecologists and collectors needing help with determinations. Unlike many other orb-weaver genera, *Chrysometa* is not readily recognized by ecologists or even by knowledgeable araneologists. While some *Chrysometa* species are found in low altitude forests and others at intermediate elevations, many are found at and above timberline. The mountains of Central America have proved unexpectedly rich in *Chrysometa* species, especially at higher elevations. The paramos of the Andes may have three or four species living sympatrically. The high altitude species are puzzling, since no two populations are quite alike. Is each pop-

ulation a separate species or does each represent a geographic form within a variable species?

The placement of the metines, which include *Chrysometa* and *Homalometa*, has been controversial. Orb-weaver genera related to *Meta* are found in all parts of the world; the diversity appears greatest in the Indopacific. In American literature they have been placed in the subfamily Metinae of the family Araneidae. Brignoli (1983) separated the metids as a distinct family. Other authors, however, have recognized a relationship between the metines and the tetragnathids. Simon (1895, 1929) placed the group in the subfamily Tetragnathinae of his family Argiopidae. More recently, Locket, Millidge and Merrett (1974) placed *Meta* of Great Britain in the Tetragnathidae, along with *Tetragnatha* and *Pachygnatha*. In the present treatment I have also placed the metines in the Tetragnathidae, though I still have some doubts about the distinctness of this family. In my past revisions of nearctic non-cribellate orb-weavers, all the genera were placed in one family (Levi, 1974, 1980a, 1981). Once it was recognized that the orb-web is a primitive character of web spiders (Levi, 1980b; Coddington, 1986), it could no longer be used as a synapomorphy to combine the araneids and tetragnathids; consequently, the relationship of the two groups required further investigation. The distinctive specialized (autapomorphic) features needed to define the family Tetragnathidae are still not satisfactory. However, as revisors remove erroneously included genera from Araneidae, the family becomes easier to define.

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I wish especially to thank Paul Hillyard. Not only does the British Museum have the largest number of types, but some specimens were requested a second time after I realized that it was essential to take off the epigynum to examine the internal genitalia.

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## METHODS

In addition to the usual examination (Levi, 1985), temporary slide mounts were made of the female epigyna with Hoyer's medium (Krantz, 1978) between two cover glasses. This was done in order to see the internal ducts that often appear on the outside as diagnostic dark marks around the sculptured part of the epigynum. In spite of this examination by compound microscope, the course of ducts in many species was not completely determined; they are among the most complex orb-weaver ducts examined. Their morphology is a special problem beyond the scope of this revisionary study. After examination, each epigynum was removed from the microscope preparation and placed in a small vial along with the specimen from which it came.

After completing my previous orb-weaver studies, I sorted other available collections and attempted to determine the additional specimens, using the newly-

made illustrations and keys to test their adequacy. With this group, however, there were so few specimens for so many species that the test could not be done. Consequently, I am less certain of species limits than I would like to be.

Many new species are described from a single individual. Taxonomists of many animal groups consider this poor procedure. Nevertheless, many North American spider species have been named from a single individual and other specimens were found subsequently.

### FAMILY TETRAGNATHIDAE Menge, 1866

Tetragnathidae Menge, 1866: 90. Type genus for the family, *Tetragnatha*.

Simon (1895) placed the genus *Meta* and its relatives into the Tetragnathinae, which he considered a subfamily along with the Linyphiinae, Nephilinae, Argiopinae, Theridiosomatinae, Arciinae, and others. In his posthumous *Araignées de France* (1929), Simon again placed *Meta* in the subfamily Tetragnathinae. This was followed by Locket, Millidge, and Merrett (1974), who placed the European metids into the Tetragnathidae. In the absence of specialized characters that might set apart the Tetragnathidae, I have been reluctant to consider them separate from the Araneidae. While more characters are known that define Tetragnathidae, most are plesiomorph, or it is difficult to ascertain whether they are specialized or left over from the past. (However, the family Araneidae has several good apomorphies.) This revision did not resolve the problem, but perhaps my forthcoming study on the remaining members of the neotropical Tetragnathidae will.

Kaston (1948) separated Tetragnathidae from Araneidae by the presence of trichobothria on the femora of the legs, by the absence or rudimentary nature of the boss on the chelicerae, and by the large and powerful chelicerae in most species. He included only *Tetragnatha*, *Pachygnatha* and *Glenognatha*, the New England representatives. According to Kas-

ton, *Meta* lacks these diagnostic trichobothria; Metinae have smaller chelicerae, with a cheliceral boss. However, the relatively simple genitalia which characterize *Tetragnatha* and *Meta* relatives might provide better diagnostic and synapomorphic features.

The nearctic and neotropical genera which belong in the Tetragnathidae are *Tetragnatha*, *Pachygnatha*, *Glenognatha*, *Cyrtognatha*, *Dolichognatha*,<sup>2</sup> *Leucauge*, *Azilia*, *Metabus*, *Meta*, *Metellina*, *Metleucauge*, *Chrysometa*, *Homalometa*, and probably also *Nephila*, *Nephilengys*, and *Zygiella*. Numerous other genera probably also belong here: *Alcimosphenus*, *Metargyra*, and *Opadometa* appear close to *Leucauge*, *Hispanognatha* close to *Glenognatha*. They will be reexamined at a later time, when I revise the neotropical *Leucauge*, *Azilia*, *Glenognatha*, *Tetragnatha*, and related genera. The family is probably closest to the Araneidae. In the past, *Tetragnatha*, *Pachygnatha*, *Glenognatha*, *Dolichognatha*, and *Leucauge* have been considered tetragnathids; *Nephila*, *Herennia*, and *Nephilengys* nephilines (Araneidae); *Zygiella* araneine; and the others metines (Araneidae) (Roewer, 1942).

### RELATIONSHIPS

Discussed below are the characters that, in addition to those published earlier (Levi,

<sup>2</sup> Forster and Platnick (1984: 5) complained that I (1981: 277) synonymized *Landana* with the genus *Dolichognatha* "on phenetic grounds." They apparently overlooked that all species of *Dolichognatha* share synapomorphic characters (Levi 1981: 278). They further complained that in 1981 I excluded archaeids from the Araneoidea while in my 1982 encyclopedia article archaeids were wrongly included. Instead of charging that I changed my mind in the wrong direction, Forster and Platnick might well have ascertained the chronology. (The direction of changes is of importance to evolutionary biologists.) The encyclopedia article (obviously not a "new" classification but merely an eclectic summary) was written in 1978 on short notice without opportunity to revise it before publication. The 1981 revision was prepared in 1979 and 1980, and conclusions published there still hold.



1980a), distinguish the tetragnathids from the araneids. I am more concerned here with the distinction between these two families (Tables 1, 2) than the placement of theridiids and linyphiids. There seems no clear distinction between the metines and the remaining tetragnathids.

1. Locket *et al.* (1974: 61) described the palpus of metines as having a long embolus lying between two sclerites originating from the tegulum. The conductor (C in Figs. 18–22) is flattened and curved; the other sclerite appears to arise from the base of the embolus and is the terminal apophysis (A in Figs. 18–22). The authors believe, and I agree, that the simplicity of structure resembles that found in *Tetragnatha*. *Tetragnatha*, however, lacks the terminal apophysis. (A terminal apophysis is shown in Locket *et al.*, 1974, fig. 36d; I may have considered the structure part of the conductor.) This contrasts with the more complex palpus found in the Araneidae, where a median apophysis functions to engage the scape of the female epigynum.

In *Dolichognatha* (Levi, 1981, figs. 13, 15) and in *Meta* (Levi, 1980a, fig. 124) there is often a lateral apophysis at the base of the embolus, which appears to be homologous with the terminal apophysis found in all *Chrysometa* (A in Figs. 18–22). *Metleucauge* has a similar sclerite between embolus and conductor which is free (Levi, 1980a, figs. 148–150) and which previously had me puzzled; undoubtedly it is also homologous with the terminal apophysis in *Chrysometa*. The males of tetragnathines and metines always lack the prominent radix found in palpi of all Araneidae (R in Levi, 1985, figs. 6–9), and usually lack a median apophysis (M in Levi, 1985, figs. 6–9).

In several tetragnathid genera the embolus is wrapped in the conductor (Table 1; Figs. 18–22), otherwise an uncommon feature of the Araneoidea and perhaps a synapomorphy. *Tetragnatha*, *Pachygnatha* and the metines have a spherical tegulum (T in Figs. 18–22) with the conductor, the embolus, and the terminal

apophysis sitting apically on the bulb of the palpus (Figs. 16, 17), rarely ventrally. This configuration and the position of embolus, conductor and terminal apophysis (when present) are apomorphies. They are not found in other Araneoidea.

In tetragnathids the cymbium of the palpus is a spoon-shaped structure located dorsally to the bulb (Figs. 16, 17); this position is also characteristic of most spiders and thus plesiomorphic. In the Araneidae, however, as a result of a twist of cymbium and bulb, the cymbium appears on one side of the palpus, towards the midline of the spider, and the dorsal position is occupied by the tegulum and subtegulum (Y in Levi, 1985, figs. 6–9). In the Tetragnathidae the cymbium may become modified; the tendency to be modified in various ways is perhaps an autapomorph character for the family. For example, in *Tetragnatha* the cymbium is reduced (Levi, 1981); in *Chrysometa* it is not reduced, but has a dorsal apophysis on its base (Figs. 17, 21); in *Homalometa* (Figs. 736, 745) it is much reduced and modified. The paracymbium (P in Figs. 16, 17, 21) is usually present and large; it may be a free structure (*Tetragnatha*, *Pachygnatha*, *Chrysometa*) or attached to the cymbium (*Meta*, *Metellina*). It is absent in *Homalometa*. In the Araneidae and Theridiidae it is unusual for the cymbium to be modified. Only in some Araneidae is the paracymbium a large structure (e.g., *Micrathena*, Levi, 1985, figs. 710, 711). The homology of these modifications is, of course, uncertain.

The sperm duct inside the tegulum is variable, short in some tetragnathid genera, long in *Chrysometa*, long and convoluted in *Azilia*, *Metabus*, and *Nephila*. This might be of importance and will be investigated further. Gerhardt (1923) observed that in *Leucauge* and *Tylorida* (a South Pacific metine), but not in araneids, the sperm duct is strengthened by ribs or punctuations.

An easily visible character of Tetragnathidae is the large tarsal organ present near the tip of the cymbium of the male palpus

(Levi, 1980a, figs. 174, 199). Though present on the cymbium of many Araneidae species, this structure is smaller and often hidden by more dense setation. Although scanning electron micrographs were made, no distinctive features other than size were found on tetragnathid or araneid tarsal organs. The presence of a large tarsal organ in tetragnathids is probably also a plesiomorph character, since a prominent tarsal organ is present on the palpal tarsi of juvenile and female spiders.

2. It may well be that the most characteristic feature of the family Tetragnathidae, and perhaps an autapomorph character, is the cone-shaped tibia of the male palpus with its distal rim slightly modified (but not sclerotized) to fit the cymbium (Fig. 16). This tibia resembles the palpal tibia of theridiids, except that the theridiid tibia has an entire distal rim. The cone-shaped male palpal tibia may be a synapomorphy of tetragnathids and theridiids. In araneids, the palpal tibia is a shallow saucer with humps (Levi, 1985, figs. 16, 310). An exception among the Araneidae is the recently described male of *Sedasta* (Ledoux, 1985), which has a cone-shaped tibia.

The length and shape of the palpal tibia are related to the mating position of the spider (Gerhardt, 1921, 1923, 1933). In *Tetragnatha* and *Pachygnatha* (and presumably also in *Glenognatha*) the female and male face one another and engage chelicerae. In *Tetragnatha*, the abdomen of the female folds under, permitting the male's long palpal articles to reach the female genital opening (Gerhardt, 1921, pl. 3, fig. 4; Levi, 1981, pl. 4). In *Pachygnatha*, male and female raise the front of their carapaces and hold their abdomens down, venters parallel (Gerhardt, 1921, pl. 3, fig. 5). The strong coupling of the chelicerae, without doubt an autapomorphy of these two genera, is probably related to the absence of an epigynum in these groups. The mating position of *Meta* and *Zygiella* differs in that the chelicerae do not engage. Facing each other at first, male and female "fold down" to a venter-to-

venter position facing the same direction in loose embrace (Gerhardt, 1933), permitted by the relatively long tibiae. Eberhard (personal communication) has photographs of *Leucauge mariana* mating and probably clasping chelicerae. In contrast, almost all Araneidae species mate on a mating thread in a tight embrace (Gerhardt, 1933; Robinson and Robinson, 1980). Such tight clasping would be difficult if the palpal tibiae were long. Helverson (1976) correctly points out that, while courtship differs from species to species, the mating position is a more conservative character.

Sperm induction, duration of palpal insertion, and number of hematochoal contractions during mating differ among species and genera of Tetragnathidae but are relatively constant in the Araneidae. In the genera *Tetragnatha* and *Pachygnatha*, according to Gerhardt (1921, but first seen by Menge, 1866: 92), both the conductor and the embolus are inserted into the female genitalia; in all other spiders, as far as is known, only the embolus is inserted.

3. The secondary eyes have a canoe-shaped tapetum and are closely grouped, both plesiomorphic characters of the family Tetragnathidae. If the eyes are spread out, the laterals distant from the medians, then the clypeus height is more than twice the diameter of the anterior median eyes (*Tetragnatha*, *Nephila*), and the secondary eyes may have lost the tapetum entirely (all secondary eyes of *Tetragnatha* and *Azilia*, and the posterior median eyes only of *Pachygnatha*). This is a synapomorph character of these genera, but a poor one because it involves loss. If the tapetum of the posterior median eye is reduced, the narrow "canoe" moves to the median of the spider (some *Chrysometa* species). In Araneidae, by contrast, the clypeus is usually low (there are exceptions), and the posterior median eyes have the canoe-shaped tapetum narrow, positioned laterally, with loops of rhabdoms toward the median (Levi, 1978, figs. 4, 5).

4. In most Tetragnathidae the chelic-

erae of the male are larger than those of the conspecific female. Exceptions are *Meta menardi*, species of *Azilia* and *Homalometa*. Males with enlarged chelicerae are found in many theridiids and linyphiids. The males of most species of Araneidae have smaller, weaker chelicerae than females.

5. The endites are relatively longer than those of Araneidae and are distally widened.

6. In resting position, the femoral-patellar joint of the anterior legs is held straight (Levi, 1980a), as is the case with many uloborids and dinopids; *Dolichognatha* is an exception. *Chrysometa* may be another (W. Eberhard, personal communication, Plate 2). Most araneids rest with the femoral-patellar joint flexed.

7. The surface of the epigynum, when present, usually lacks the three-dimensional sculpturing found in Araneidae, and the epigynum may be reduced or lacking (see above) (*Meta*, *Metellina*, *Pachygnatha*, and *Tetragnatha*). The epigynum of linyphiids and theridiids is also a relatively flat structure.

8. Species of Tetragnathidae commonly have the abdomen underlain by silver or white spots. Silver spots are relatively uncommon in Araneidae; they are found in *Argiope*. In the Theridiidae, silver spots are found in *Argyrodes* and *Thwaitesia*; in linyphiids they are also less common.

9. Perhaps the most illuminating discussion of the similarities between Metinae and Tetragnathinae was made by Wiehle (1967) and is based mainly on European species. Some of Wiehle's statements, however, could not be confirmed. The sperm of *Meta* and *Tetragnatha* has a spherical head and a tail like that of pholcids and *Atypus*, while Araneidae and Theridiidae have peg- or pencil-shaped sperm. We do not currently know the shape of sperm in related families; sperm shape in *Meta* and tetragnathids may be a plesiomorph condition. Here, he fails to cite any reference. An earlier paper by Tuzet and Manie (1959) pictures the sperm head of *Nuctenea cornuta* as oval to

spherical, and that of *Tetragnatha piniicola* as elongate or pencil-shaped.

Another character mentioned by Wiehle is that the eggs of *Meta* (and *Tetragnatha*) are not agglutinated as are those of *Araneus*. In *Meta* the eggskin is only partly shed and covers part of the abdomen and leg tips for a day, after which it is shed in the first molt along with the exuvia (Holm, 1940). Nonagglutination is presumably a plesiomorph condition. Data provided by Kaston (1948) indicate that the agglutination of eggs cannot be generalized; it is not the same in related species.

Wiehle (1967) discusses the lack of fertilization ducts in the epigynum of *Meta* and *Metellina*, and the complete absence of the epigynum in *Tetragnatha*. However, fertilization ducts, sclerotized ones at that, are present in both *Chrysometa* and *Homalometa*. We can only conclude that the internal parts of the female copulating structures are unusually variable in the family Tetragnathidae.

10. A number of important and consistent differences in the behavior of Tetragnathidae and Araneidae have recently been cited by Eberhard (1982). He found no distinct differences between species that had been placed in the metines and tetragnathid species. Eberhard includes observations on more than eight species in five genera of tetragnathines, more than seven species in five genera of metines, and more than 50 species in 28 genera of araneines, as well as anapids and uloborids. The many species observed include species of *Meta*, *Chrysometa*, *Metabus*, and *Leucauge* which made the same web-building movements as species of *Dolichognatha*, *Tetragnatha*, *Azilia*, and *Glenognatha* (tetragnathines), but not the same as members of the Araneidae.

Although the main features of web construction were the same in the five groups (tetragnathines, metines, araneids, anapids, and uloborids), there were slight differences in orb-web construction and wrapping behavior. The first difference cited is that of locating sticky spiral at-



TABLE 1. MALE PALPAL CHARACTERS THAT SEPARATE THE FAMILY TETRAGNATHIDAE FROM THE ARANEIDAE.<sup>†</sup>

Taxon	a	b	c	d	e	f	g	h
<b>Tetragnathidae</b>								
<i>Tetragnatha</i>	+	L	+M	+	S	—	—*	W
<i>Pachygnatha</i>	+	L	+M	+	S	—	—	W
<i>Glenognatha</i>	+	L	+M	+	S	—	—	W
<i>Dolichognatha</i>	+	—	—M	+	C	—	L	S
<i>Leucauge</i>	+	—	—H	+	C	—	—	W
<i>Azilia</i>	+	—	—M	+	C	—	—	—
<i>Meta</i>	+	—	—M	—	C	—	L	W
<i>Metellina</i>	+	—	—M	—	—	—	L	W
<i>Metleucauge</i>	+	—	—M	+	C	—	A	S
<i>Chrysometa</i>	+	+	+M	+	C	—	L	W
<i>Homalometa</i>	+	L	A	—	?	?	?	?
<i>Nephila</i>	+	—	—H	+	C	—	—	W
<i>Zygiella</i>	+	—	±M	—	—	R, M	L	S
<b>Araneidae</b>								
<i>Argiope</i>	—	—	—H	—	—	R, M	—	S
<i>Araneus</i>	—	—	—H	—	—	R, M	H	S
<i>Micrathena</i>	—	—	—M	—	—	R, M	A	S

<sup>†</sup> a. Cymbium dorsal (+), cymbium mesal (—); b. Cymbium modified by being lobed (L) or having an apophysis (+), not modified (—); c. Paracymbium a free sclerite (+), attached to cymbium (—), absent (A). Paracymbium large, modified and sculptured (M), a small hook (H); d. Tegulum spherical with sclerites apical (+), sclerites on face of tegulum (—); e. Sperm duct in tegulum coiled (C) or swollen (S) of about equal diameter within tegulum, not coiled (—); f. Radix present (R), median apophysis present (M), both sclerites absent (—); g. Terminal apophysis a lobe from base of embolus (L), a free sclerite (A), separated by distal hematodocha (H), absent (—). \*Part of what I considered the conductor (Levi, 1981) may be terminal apophysis (Locket *et al.*, 1974, fig. 36d); h. Length of embolus supported (S) by or wrapped in conductor (W), conductor absent (—).

tachment points. Tetragnathids including metines (and also in theridiosomatids, anapids, and mysmenids, J. Coddington, personal communication) tap forward with the inside leg I and araneids tap sideways with the outside leg I. However, some *Chrysometa* species have been observed making both tetragnathid and araneid movements. Eberhard (1982) gives reasons why he considers the tetragnathid movements primitive, but does not consider the uloborids or the dinopids as outgroups.

The second behavioral difference is the spider's contact with the temporary spiral when starting to lay down the sticky spiral. Tetragnathids, including metines (and theridiosomatids, anapids, and mysmenids, J. Coddington, personal communication), lose contact. The spiders move beyond the outermost loop of the temporary spiral, completely out of contact with it

when attaching the outermost sticky spiral. Araneids all maintain contact. Eberhard could not decide which behavior was primitive and which derived.

Tetragnathids, including metines, usually attack-wrap prey without rotating before biting, or slowly rotate prey after cutting it free of the web.<sup>3</sup> Araneids usually attack-wrap their prey, rotating it like a spitted animal in a rotisserie, before biting. (Attack-wrapping is not used with some prey and is never found in some genera, e.g., *Gasteracantha*, *Micrathena*, *Mastophora*, *Dicrostichus*, *Poecilopachys*, *Celaenia* and *Nephila*. It may be a loss or a primitive condition.)

Some tropical *Tetragnatha* and *Glenognatha*, however, differed from metines

<sup>3</sup> This behavior was reversed in Eberhard (1982) (Eberhard in letter, 1985).

TABLE 2. CHARACTERS THAT SEPARATE THE FAMILY TETRAGNATHIDAE FROM THE ARANEIDAE.†

Taxon	2	3	4	6	7	8	10
Tetragnathidae							
<i>Tetragnatha</i>	+	L	+	+	L	+	+
<i>Pachygnatha</i>	+	L	+	+	L	+	?
<i>Glenognatha</i>	+	L	+	+	L	+	+
<i>Dolichognatha</i>	+	+	+	—	+	+	+
<i>Leucauge</i>	+	+	S	?	+	+	+
<i>Azilia</i>	+	L	S	?	+	—	+
<i>Meta</i>	+	+	S	+	—	—	+
<i>Metellina</i>	+	+	+	+	+	+	?
<i>Metleucauge</i>	+	+	S	?	+	—	?
<i>Chrysometa</i>	+	+	+	—	+	+	+
<i>Homalometa</i>	+	+	S	?	+	+	?
<i>Nephila</i>	—	+	S	+	+	—	N
<i>Zygiella</i>	+	+	S	—	+/-	+	?
Araneidae							
<i>Argiope</i>	—*	—	—	—	—	+/-	—
<i>Araneus</i>	—*	—	—	—	—	—	—
<i>Micrathena</i>	—*	—	—	—	-/+	—	—

† Numbers refer to paragraphs in text under Relationships. 2. Male palpal tibia long, cone-shaped (+), short, wider than long (—), with bulges (\*); 3. Secondary eyes with canoe-shaped tapetum (+), with tapetum lost in at least posterior median eyes (L), with canoe-shaped tapetum reduced and moved laterad (—); 4. Chelicerae of male longer than those of female (+), same size (S), smaller than female (—); 6. Femoral-patellar joint of legs held straight out at rest (+), flexed (—); 7. Epigynum lost (L), flat (+), three dimensional (—); 8. Abdomen cuticle underlain with numerous white or silver pigment spots (+), with few white silver spots (—); 10. Web construction behavior tetragnathid (+), nephiline (N), araneid (—) (see Eberhard, 1982).

in hub construction. According to observations by Eberhard, the hub is left intact in some species of *Glenognatha* and *Tetragnatha*, while in *Meta* and *Metellina* the hub center is removed and a hole left in the middle. *Dolichognatha* and *Azilia*, like most araneids, replace the center after its removal. According to other literature, temperate *Tetragnatha* have an open hub (Kaston, 1948; Wiehle, 1963) like the metines observed by Eberhard. Hub construction is probably too variable to be useful, although it is widely quoted as a differentiating character.

11. Vollrath (in manuscript) observed that *Nephila*, *Zygiella*, *Meta*, and possibly *Tetragnatha* suppress regeneration of lost legs at the coxal joint, along with theridiids and linyphiids. *Araneus* and *Argiope* in contrast regenerate lost legs.

Unfortunately, in none of these behavioral differences is tetragnathid behavior clearly specialized. I plan to return to this problem when revising the remaining neotropical Tetragnathidae.

There are two controversial groups: *Nephila* and its relatives and *Zygiella*.

Gerhardt (1923, 1933) considers the *Nephila* palpus secondarily reduced. But the similarities in palpal anatomy of *Leucauge* and *Nephila*, the convoluted duct in the large tegulum (also present in *Azilia* but unusual in other spiders), the distal placement of the embolus, and the embolus wrapped in the conductor are probably synapomorphies. Additional similarities between species of the two genera are coloration and abdomen shape. The unusual bottle-brush setae on the legs of the American *Nephila clavipes* may be homologous to those found in some Indo-Pacific *Leucauge* species, which Archer (1951) placed into *Opadometa*. However, the short, broad palpal tibia of the small *Nephila* males may reflect its araneid mating position.

Gerhardt (1923, 1933) comments on the similar, reduced palpi of *Gasteracantha* and *Micrathena*, but the palpi of these two genera resemble those of other Ara-



neinae (Levi, 1978, 1985). The palpus of *Nephila*, in contrast, is similar to that of *Leucauge*.

Homann (1952) was in error when he wrote that *Nephila*'s eyes are araneid (Homann, personal communication). They do not have the narrow canoe-shaped tapetum characteristic of Araneidae.

*Nephila* (Eberhard, 1982) and the related *Nephilengys* and *Herennia* differ in web-building behavior from both tetragnathids and araneids (Eberhard, 1982). The sticky spiral attachment point is located by extending the outside (relative to the spiral) leg IV backward and sidling it along from one point to the next, rather than moving it inward to the hub and then back out again. The order of radii placement differs from both araneids and tetragnathids: after one trip out from the hub, two radii are attached to two points on the frame; other spiders attach only one radius. The original hub is left intact, not bitten out or replaced. Nonsticky spirals are retained. All prey is attacked by biting and only sometimes wrapped afterwards. The first two behaviors (radii and hub) may be specialized, while the third and fourth are probably primitive (Eberhard, 1982).

*Zygiella* has an eye arrangement and tapetum structure similar to *Meta* (Levi, 1974), and a palpus with a similar cone-shaped tibia. The structure of the palpal organ is more complex, however, having a median apophysis and two sclerites (radix and stipes) at the base of the embolus. Apparently the median apophysis and some of these sclerites evolved independently several times (e.g., in Linyphiidae, Theridiidae) from metine-like ancestors. If the function of the median apophysis is to hook into the scape of the female epigynum, and only some *Zygiella* species (*Z. stroemi*, *Z. kochi*) have a scape, then the median apophysis might represent a vestige in the scapeless *Z. x-notata* and *Z. dispar*. What then is its evolutionary significance in the scapeless Theridiidae? The paracymbium of *Zygiella* is complex and free, more closely resembling that of Tet-

ragnathidae than that usually found in Araneidae. Also, the coloration and the white spots and dark markings of the abdomen are characteristic of Tetragnathidae, not of Araneidae. [Several *Chrysometa* were originally described in *Zilla* (= *Zygiella*).] (The distal hematodocha in Levi, 1974, figs. 7, 30 is mislabeled. It is not homologous to the hematodocha, called "distal hematodocha," of *Eriophora* and *Ara-neus*, located between embolus and terminal apophysis.)

Gerhardt (1933) writes that the mating position of *Zygiella* resembles that of *Meta*. It also resembles that of some *Ara-neus* species (Blanke, 1983).

It is perhaps easier to split than to lump, to elevate genera to families if they have autapomorphies that are distinct, and to elevate species groups to genera. Forster (personal communication) considers *Leucauge* to be in a family by itself. Perhaps this is correct; at present I am unaware of supporting evidence. *Glenognatha*, with its anterior spiracle, might be considered another candidate for splitting off into its own family, although it is otherwise similar to the large-sized *Pachygnatha*. The advanced spiracle probably represents physiological adaptation to small size and resultant greater water loss.

### *Chrysometa* Simon

*Chrysometa* Simon, 1895: 736. Type species *Chrysometa tenuipes* (Keyserling) by original designation.

*Pseudometa* F.P.-Cambridge, 1903: 444. Type species *Pseudometa flava* (O. P. Cambridge) by original designation (not *Pseudometa* Aurivillius, 1901, a beetle.) NEW SYNONYMY.

*Capichameta* Soares and Camargo, 1955: 578. New name for *Pseudometa* F.P.-Cambridge, preoccupied. NEW SYNONYMY.

*Synonymy.* Simon designated, as type for *Chrysometa*, *Tetragnatha tenuipes* Keyserling, but misidentified the species. The specimens that Simon examined and called *C. tenuipes* came from St. Vincent Island, Lesser Antilles and were actually a new species close to *C. tenuipes*, here called *C. eugeni* (Figs. 628–634). *Pseudometa flava* (Figs. 530–536) has genitalia

similar to those of *C. tenuipes* (Figs. 647–651), but the abdomen is differently shaped and colored.

**Diagnosis.** *Chrysometa* differs from the related *Metellina* by the genitalia: in males, by the presence of an apophysis on the cymbium (Figs. 17, 21) of the palpus; and by the presence of a more distinct terminal apophysis (A in Figs. 18–22), which is usually attached to the embolus. In females, the fertilization ducts of the epigynum are often more sclerotized than the connecting ducts (Figs. 577, 589, 594).

*Chrysometa* differs from the species of the “*Meta porteri*” group found in Chile by lacking the numerous teeth on the outside of the palpal cymbium of the male, and by lacking the projecting epigynum of the female. Also, *Chrysometa* species are smaller than species of the “*Meta porteri*” group.

*Chrysometa* has been confused with *Zygiella* and *Leucauge*. No native *Zygiella* species are known from the neotropics. *Chrysometa* males lack a median apophysis whereas *Zygiella* has one. The eye region of the carapace is narrower in *Chrysometa* (Figs. 1–4) than in *Leucauge*, and the palpal and epigynal anatomy differ. The color pattern of the underside of the abdomen in *Leucauge* is diverse, while it is almost always dusky to black with a longitudinal light line on each side in *Chrysometa* (Fig. 144).

*Chrysometa* lacks the long trichobothria on the fourth femur characteristic of *Leucauge*. Some species of *Chrysometa* are superficially quite similar in appearance to the theridiid *Thwaitesia* (Levi, 1963).

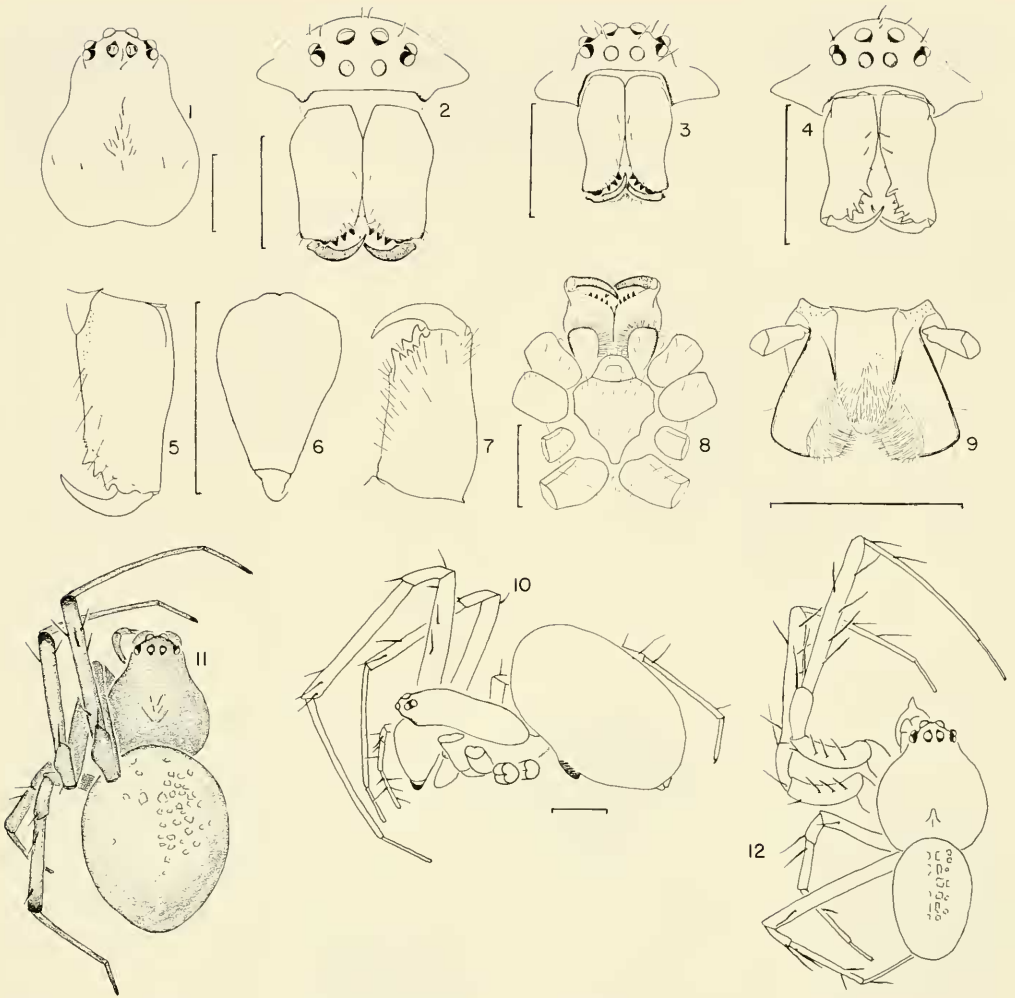
**Description. Coloration.** Carapace orange with black eye rings. Often a characteristic brown patch covers the top of the head, but not its sides, coming to a point in the middle of the thorax. The patch may enclose paired light areas (Figs. 31, 82). Chelicerae are sometimes dark; sternum and labium are orange, occasionally dark brown to black, contrasting with the light coxae. The legs are orange, frequently with dark rings. The abdomen is

covered by silver spots; there may be dark pigment anteriorly, or an irregular patch on each side on the shoulders and a posterior median band made of transverse black bars (Figs. 377, 393, 573). The venter of the abdomen in almost all species is dusky to black with a light longitudinal line of silver spots on each side (Figs. 144, 326, 339). In some species the line begins or ends in a larger silver patch, constricting the black area (Fig. 467).

**Structure.** The carapace is narrow in front, the thoracic depression indistinct (Figs. 1–4). In males the thoracic depression is only rarely distinct. The eyes are large, subequal in size; the secondary eyes have a canoe-shaped tapetum which may be narrowed in the posterior median eyes and situated toward the midline of the spider (unlike the narrowed tapetum of Araneidae which is situated laterally). The anterior median eyes are about their diameter apart, the same distance or slightly more from the laterals. The posterior median eyes are their diameter apart, one to two diameters from the laterals. The laterals on each side touch. The clypeus height equals about one anterior median eye diameter (Figs. 1–4, 10–12).

The chelicerae of all species have three strong teeth on the anterior margin, four small teeth or denticles on the posterior margin. The second denticle from the proximal end of the posterior margin may be smaller and may have moved anterior toward the midline (Figs. 5–7). The chelicerae also have some small tubercles bearing setae in front of the anterior three teeth and at the proximal end of the fang groove. The venom glands are small and barely extend beyond the chelicerae (in *C. alboguttata*). Males have the chelicerae longer than conspecific females, as is common in tetragnathids (Fig. 4). The first leg is longest, the third shortest, and the second only slightly longer than the fourth. Males have longer legs than females (Figs. 10–12).

The abdomen varies in shape among species; it is usually oval, widest at the middle or slightly anterior to the middle.



Figures 1-12. Morphology of *Chrysometa*. 1. Female carapace. 2. Female eye region and chelicerae. 3, 4. Male eye region and chelicerae. 5-7. Female chelicerae. 5. Anterior. 6. Lateral. 7. Posterior. 8. Female coxae, sternum and chelicerae. 9. Female endites and rostrum, anterior. 10, 11. Female. 10. Lateral. 11. Dorsal. 12. Male. 1-3, 8, 10-12. (*C. flava*). 4. (*C. cornuta*). 5-7, 9. (*C. alboguttata*).

Scale lines. 1.0 mm.

Some species have a spherical abdomen (Fig. 656); in others there are two anterior dorsal humps (Fig. 340); in those species having the abdomen all silver, the abdomen has a slight anterior median projection (Figs. 687, 688, 696, 707).

Unlike in *Tetragnatha* species, abdomen size varies little among adults. Males are slightly smaller than females.

**Genitalia.** The female epigynum may

have a septum continuing into a posterior transverse bar. To the sides of the septum or bar are the openings (Fig. 14). Sometimes the epigynum is heavily sclerotized; it only rarely has a scape (Figs. 336, 343). The epigynum opens into connecting ducts leading to sclerotized seminal receptacles which often have sclerotized, perhaps secretory, lobed structures next to them. From the base of the seminal receptacles



originate sclerotized fertilization ducts (Figs. 576, 577, 588, 589). It is uncommon in spiders for these ducts to be sclerotized. The female duct system is quite unusual in its complexity. Although the sclerotized fertilization ducts are located ventrally, they are often surrounded by and seemingly imbedded in the connecting ducts. The connecting ducts are short in females conspecific with males having a short embolus. In many species the ventral side of the epigynum has a pair of smooth, thin-walled, spherical structures, apparently attached to the fertilization ducts as well as to the connecting ducts (Figs. 555, 562). They do not contain sperm, and their function is unknown. This spherical structure may have been overlooked in some species of which few specimens were available. The walls of the connecting ducts are frequently pleated, rarely sclerotized, always difficult to follow. Often they seem to follow the course of an Escher-like paradox.

The male palpal structure is also difficult to make out; it is most easily seen in males with a short, sclerotized embolus and conductor. The embolus is supported by a parallel structure originating from its base, the terminal apophysis (A in Figs. 18–22). Embolus and terminal apophysis are in turn supported by the conductor (C), a free sclerite that may be long. In those species having a long embolus and terminal apophysis, the structures are difficult to distinguish in an unexpanded palpus (Figs. 16, 17). When long, these two sclerites may originate from inside a cup-shaped tegulum (Figs. 18, 19). The cymbium always has an apophysis (Fig. 17); the paracymbium is a separate sclerite broadly attached to the cymbium.

*Natural History.* The web, where known (*C. poas*, *C. craigae*), is an orb with a signal line and a retreat. The retreat is commonly on a branch or on the base of a leaf (Plate 1). Between retreat and hub is a vacant sector. The web resembles that of *Zygiella*. At its type locality, *Chrysometa poas* does not have the vacant sector. According to Eberhard (personal

communication, 1985), there are three recognizable types of web: one, the webs of *Chrysometa alboguttata* and *C. guttata* with a free sector and very round hub and bell-shaped retreat; two, *C. saladito* and *C. calima* with a retreat but usually not a free sector and a more oval hub (these species switch from *Tetragnatha*-like to *Araneus*-like sticky spiral localization behavior during the construction of each web); and three, *C. digua*, etc.-type with little if any retreat and with neither a free sector nor a distinctly oval hub. I suspect that the order of listing is from the most to the least derived web (Plate 1). The spiders do not extend their legs when resting (Plate 1).

The spiders are found in shaded forests, or, if above timberline, in paramos on steep, shaded slopes.

All specimens from northern Colombia lacked the silver spots. Is this due to the preserving fluid or to a genetic variation of the species of the area?

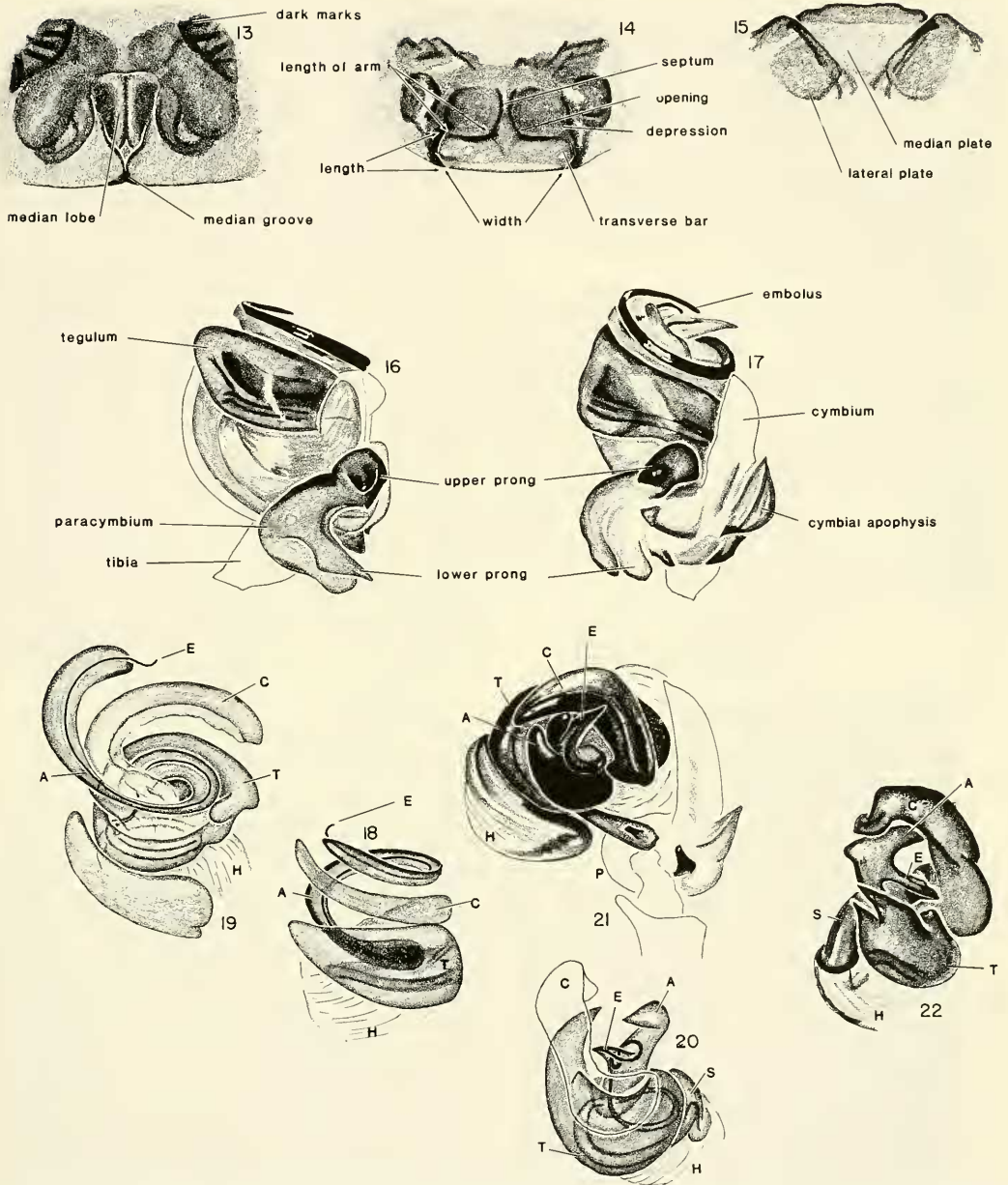
*Distribution.* Species are known from the mountains of Mexico to Bolivia and at lower elevations from Central America to Brazil (Map 1). While the distribution of species reflects popular collecting sites, many more species are expected from other ranges of the Andes (Maps 2–4).

### Misplaced Species

*Chrysometa* species have been named in several genera: *Capichameta*, *Chrysometa*, *Meta*, *Pseudometa* and *Zilla*. Some have also been named in *Argyropeira* or *Leucauge*. The following is the correct placement of those species which do not belong to *Chrysometa*. They are listed here in alphabetical order of the original combination. *Argyropeira* and *Leucauge* species are not listed since most are correctly placed in *Leucauge* in the catalogs of Roewer (1942), Bonnet (1957), and Brignoli (1983).

*Chrysometa T-notata* Tullgren, 1905: 28, pl. 3, fig. 8, ♀. Female holotype from Argentina (NRS), examined, is *Larinia T-notata*. NEW COMBINATION.

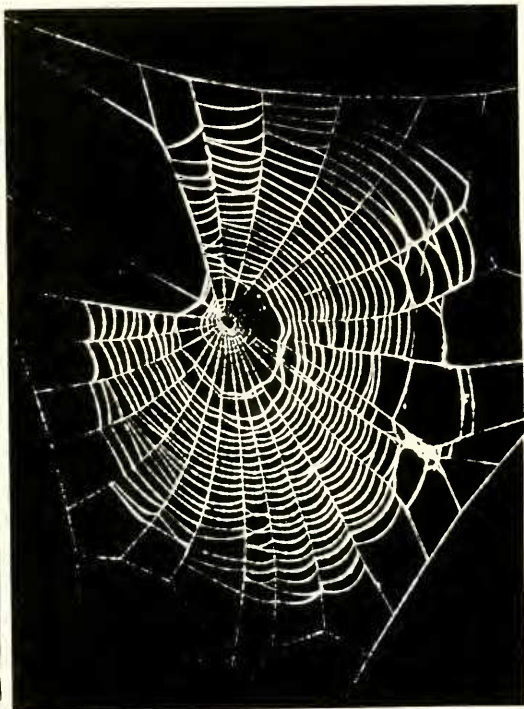
*C. tristis* Mello-Leitão, 1941: 153, fig. 49, ♀. Female



Figures 13-22. Genital morphology of *Chrysometa*. 13-15. Epigynum. 13, 14. Ventral. 15. Posterior. 16-22. Left male palpus. 16. Ventral. 17. Lateral. 18-22. Expanded. 13. (*C. minuta*). 14, 15. (*C. boraceia*). 16, 17. (*C. guttata*). 20, 22. (*C. troya*). 21. (*C. zelotypa*).

Scale lines. 0.1 mm.

Abbreviations. A, terminal apophysis; C, conductor; E, embolus; H, basal hematodocha; P, paracymbium; T, tegulum.





holotype from Argentina (MULP), examined, is *Dubiaranea tristis*. NEW COMBINATION in family Linyphiidae.

*Epeira longipes* Nicolet, 1849: 491. Specimens from Chile (MNHN), examined, belong to the *Meta porteri* group.

*Linyphia branickii* Taczanowski, 1873: 67. Female holotype from Guyana (PAN), examined; placed by Petrunkevitch, 1911 into *Chrysometa* is *Leucauge branickii*. NEW COMBINATION.

*L. melanocephala* Taczanowski, 1873: 70. Female holotype from Guyana (PAN), examined; placed by Keyserling (1893) in *Zilla* is *Mangora melanocephala*. NEW COMBINATION.

*Meta adjuntaensis* Petrunkevitch, 1930: 346, fig. 234, ♀. Female holotype from Adjuntas, Puerto Rico (PMY), lost, is *Araneus adjuntaensis*. NEW COMBINATION.

*M. aurora* Simon, 1901: 19. Female holotype from Patagonia (MNHN), examined, belongs to the *Meta porteri* group.

*M. berlandi* Caporiacco, 1954: 80, fig. 80, ♀. Female from French Guiana (MZUF), examined, is *Cyrtophora guyanensis* (Keyserling). NEW SYNONYMY.

*M. blanda* Bryant, 1945: 386, fig. 22, ♀. Female type from Hispaniola (MCZ), examined, is *Araneus blanda*. NEW COMBINATION.

*M. brasiliica* Soares and Camargo, 1948: 380, figs. 37–39, ♀ ♂. Female holotype from Est. São Paulo, Brazil (MZSP), examined, is *Cyrtophora guyanensis* (Keyserling). NEW SYNONYMY.

*M. bryantae* Brignoli, 1983: 320. New name for *Meta blanda* Bryant (not *Meta blanda* C. L. Koch) is *Araneus blanda*. NEW COMBINATION.

*M. chilensis* Tullgren, 1902: 22, pl. 1, fig. 7, ♀. Female holotype from Chile (NRS), examined, belongs to the *Meta porteri* group.

*M. cordillera* Tullgren, 1902: 23, pl. 2, fig. 3, ♀. Female holotype from Chile (NRS), examined, belongs to the *Meta porteri* group.

*M. echinata* Tullgren, 1902: 19, pl. 2, fig. 1, ♂. Male holotype from Chile (NRS), examined, belongs to the *Meta porteri* group.

*M. espiritosantensis* Soares and Camargo, 1955: 578, figs. 4, 5, ♂. Male holotype, lacking both palpi, from Est. Espírito Santo, Brazil (MZSP), examined, is *Cyrtophora guyanensis* (Keyserling). NEW SYNONYMY.

*M. fuegiana* Simon, 1902: 26. Female holotype from Tierra del Fuego (MNHN), examined, belongs to the *Meta porteri* group.

*M. globosa* O. P.-Cambridge, 1889: 2, pl. 1, fig. 5, ♀. Female holotype from Guatemala (BMNH), ex-



Map 1. Approximate number of species of *Chrysometa* known from different regions.

amined, is the type species of the genus *Mecynometa* Simon 1895 and is *Leucauge globosa*. NEW COMBINATION.

*M. grvida* (O. P.-Cambridge, 1899: 290) placed by Roewer (1942) in *Meta*, is *Metabus gravidus* O. P. Cambridge.

*M. hotteiensis* Bryant, 1945: 387, fig. 25, ♀. Female holotype from Hispaniola (MCZ), examined, is *Araneus hotteiensis*. NEW COMBINATION.

*M. longimana* Keyserling, 1881: 555, pl. 16, fig. 6, ♀. Female holotype from Peru (PAN), examined, placed by Petrunkevitch, 1911 in *Chrysometa*, is *Leucauge longimana*. NEW COMBINATION.

*M. mariana* Keyserling, 1881: 560, pl. 16, fig. 10, ♀. Female syntypes from Peru (BMNH), examined, are *Leucauge mariana*. NEW COMBINATION.

*M. nigrohumeralis* F. P.-Cambridge, 1898: 18, pl. 2, fig. 4, 5, ♀. Female holotype from Juan Fernandez Islands (BMNH), examined, belongs to the *Meta porteri* group.

*M. patagiata* Simon, 1901: 18. Female holotype from Chile (MNHN), examined, belongs to the *Meta porteri* group.

*M. porteri* Simon, 1900: 51. Female holotype from Chile (MNHN), examined, belongs to the *Meta porteri* group.

*M. torta* Tullgren, 1902: 21, pl. 2, fig. 2, ♂. Male

←

Plate 1. *Chrysometa* webs. Above left, *C. saladito*, sticky spiral area 11 cm wide. Above right, *C. zelotypa*, sticky spiral area 14 cm wide (from Costa Rica). Below left, *C. craigae*, sticky spiral area 16 cm wide. Below right, *C. palenque*, sticky spiral area 14 cm wide (photo above left W. Eberhard, others J. Coddington).

- holotype from Chile (NRS), examined, belongs to the *Meta porteri* group.
- M. speciosissima* Keyserling, 1881: 557, pl. 16, fig. 8, ♀. Female holotype from Pumamarca, Peru (PAN), examined, is *Leucauge speciosissima*. NEW COMBINATION.
- Zilla bösenbergi* Keyserling, 1878: 575, pl. 14, figs. 4, 5, ♀. Female, male syntypes from Uruguay (ZIMH), examined, is *Zygiella x-notata*. NEW SYNONYMY.
- Z. decolorata* Keyserling, 1893: 306, pl. 15, fig. 226, ♀. Female holotype from Guatemala, but male specimen from Blumenau, Brazil (BMNH), examined, is a *Mangora*.
- Z. guyanensis* Keyserling, 1881: 554, pl. 16, fig. 5, ♂. Male holotype from Cayenne, French Guiana (PAN), examined, is *Cyrtophora guyanensis*. NEW COMBINATION.
- Z. rogenhoferi* Keyserling, 1878: 578, pl. 14, fig. 6, ♀. Female holotype from Brazil (NHMW), examined, is *Metazygia rogenhoferi*. NEW COMBINATION.

### Lost types and unrecognizable names

- Argyropeira preciosissima* Keyserling, 1893: 367, pl. 19, fig. 274, ♀. Female holotype from Guatemala (BMNH), lost. It had been placed into *Meta* by Petrunkevitch, 1911, but it is probably a small species of *Leucauge*.
- A. voluptabilis* Keyserling, 1893: 356, pl. 18, fig. 263, ♂. Male from Monte Verde, Est. Rio de Janeiro, Brazil (BMNH), lost. It had been placed into *Meta* by Petrunkevitch, 1911. It is probably a *Chrysometa*.
- Meta albiparsa* Mello-Leitão, 1944: 332. Male from Argentina (MULP), lost. The description is not recognizable.
- M. longipes* Keyserling, 1881: 274, pl. 11, fig. 4. Male and female syntypes from Pumamarca [sic Pumamarca, Dpto. Junín], Peru, lost (not in BMNH, PAN). This is probably a *Chrysometa*.
- Zilla punctata* Keyserling, 1893: 305, pl. 15, fig. 225, ♀. Female holotype from Nova Friburgo, Est. Rio de Janeiro, Brazil (BMNH), lost.

### KEY TO FEMALES

- |          |  |                  |
|----------|--|------------------|
| 1.       | Epigynum in ventral view with an upside down T, a posterior transverse bar with a median anterior stalk or septum or attachment (Figs. 14, 521, 727)           | 2                |
| –        | Epigynum otherwise   | 50               |
| 2 (1).   | Septum and transverse bar forming an anteriorly pointing triangle (Figs. 108, 642, 705)  | 3                |
| –        | Septum and bar otherwise   | 5                |
| 3 (2).   | Epigynum as in Figure 705; Bolivia   | <i>bolivia</i>   |
| –        | Epigynum as in Figures 108, 642; Mexico, West Indies   | 4                |
| 4 (3).   | A large dark circle and dark patch on each side anterior of sculpturing of epigynum (Fig. 108); Cuba   | <i>distincta</i> |
| –        | Two pairs of dark patches on each side anterior of sculpturing of epigynum (Fig. 642); Mexico  | <i>puebla</i>    |
| 5 (2).   | Depressions of epigynum deep and large, septum very thin, only edge of transverse bar showing (Figs. 115, 727)   | 6                |
| –        | Depressions, septum and bar otherwise  | 7                |
| 6 (5).   | Epigynum with transverse bar turning anteriorly on sides (Fig. 115); Central America   | <i>nuboso</i>    |
| –        | Epigynum and bar otherwise (Fig. 727); southern Brazil   | <i>jordao</i>    |
| 7 (5).   | Septum as wide or wider than length of posterior transverse bar in ventral view (Figs. 225, 578)   | 8                |
| –        | Septum narrower than length of posterior transverse bar (Fig. 14)  | 24               |
| 8 (7).   | Epigynum a triangular posteriorly extending bulge with paired depressions; depressions completely surrounded by rim (Fig. 225); Colombia                       | <i>carmelo</i>   |
| –        | Epigynum otherwise   | 9                |
| 9 (8).   | Septum as long or longer than length of each arm of bar (Figs. 14, 517, 578)   | 10               |
| –        | Septum shorter than length of each arm of transverse bar (Figs. 499, 609)  | 14               |
| 10 (9).  | Rim of septum continuing anterolaterally (Figs. 510, 517)  | 11               |
| –        | Rim of septum otherwise  | 12               |
| 11 (10). | In posterior view transverse bar bulging (Fig. 518); in ventral view dark parallel longitudinal marks anterior of sculpturing near midline (Fig. 517); Ecuador | <i>machala</i>   |
| –        | In posterior view transverse bar relatively flat (Fig. 511); in ventral view a dark anterior mark on each side (Fig. 510); Costa Rica                          | <i>craigae</i>   |
| 12 (10). | Stalk constricted posteriorly (Fig. 578); Colombia   | 13               |
| –        | Stalk widest posteriorly (Fig. 637); Guyana to Amazon area   | <i>flavicans</i> |
| 13 (12). | Anterior dark marks of epigynum paired, diagonal to transverse (Fig. 649)  | <i>tenuipes</i>  |
| –        | Dark marks as in Figure 578  | <i>fidelia</i>   |
| 14 (9).  | Arms of transverse bar swollen at lateral ends (Figs. 614, 676)  | 15               |
| –        | Arms of transverse bar not swollen at ends (Figs. 499, 620)  | 16               |
| 15 (14). | Septum bulging and constricted posteriorly (Fig. 614); Mexico  | <i>chipinque</i> |
| –        | Septum otherwise (Fig. 676); Ecuador   | <i>otavalo</i>   |





Plate 2. *Chrysometa* webs. Above, *C. guttata* (notice spider on leaf; sticky spiral area 18 cm wide). Below, *C. digua*, sticky spiral area 13 cm wide (photo W. Eberhard).

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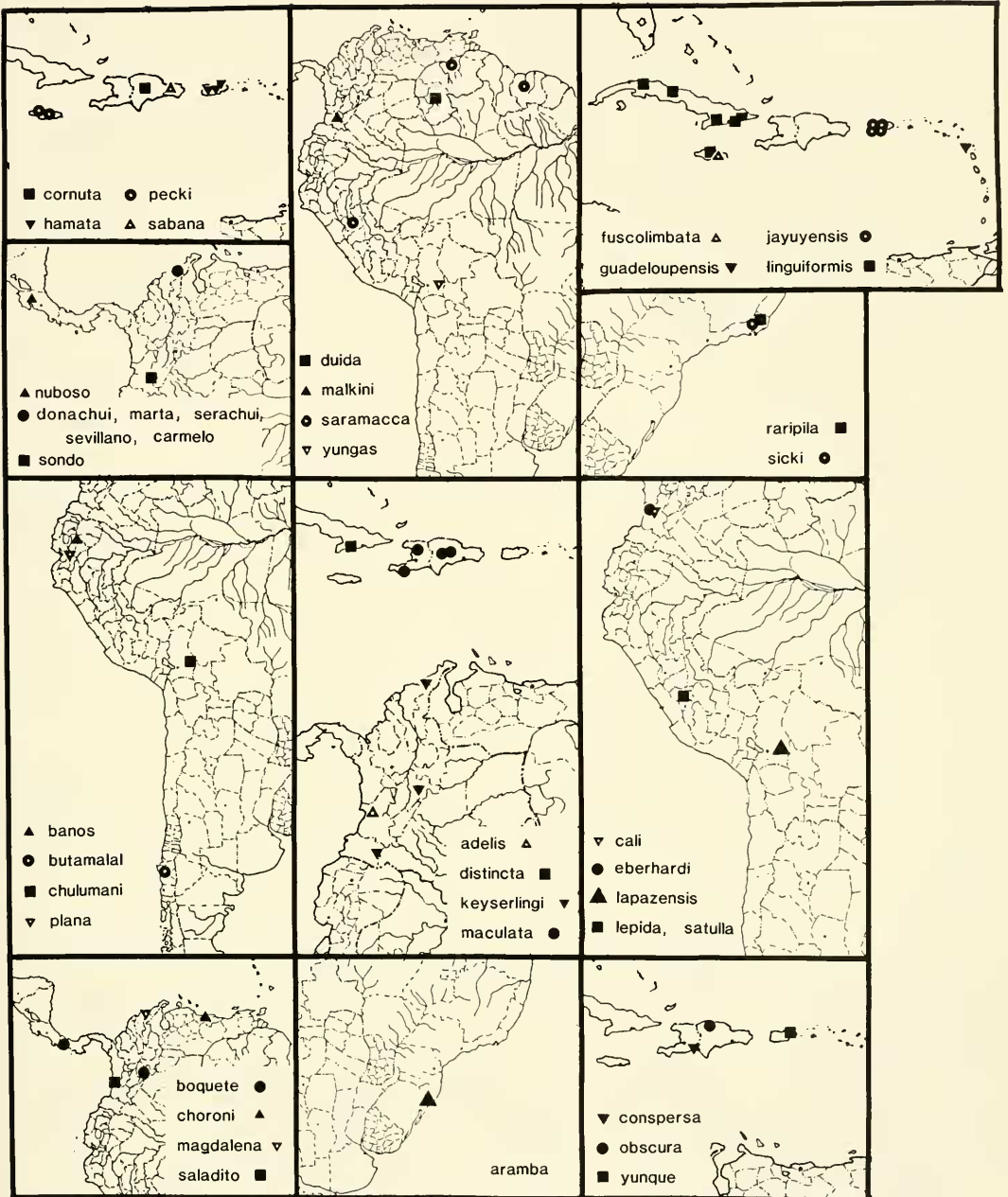
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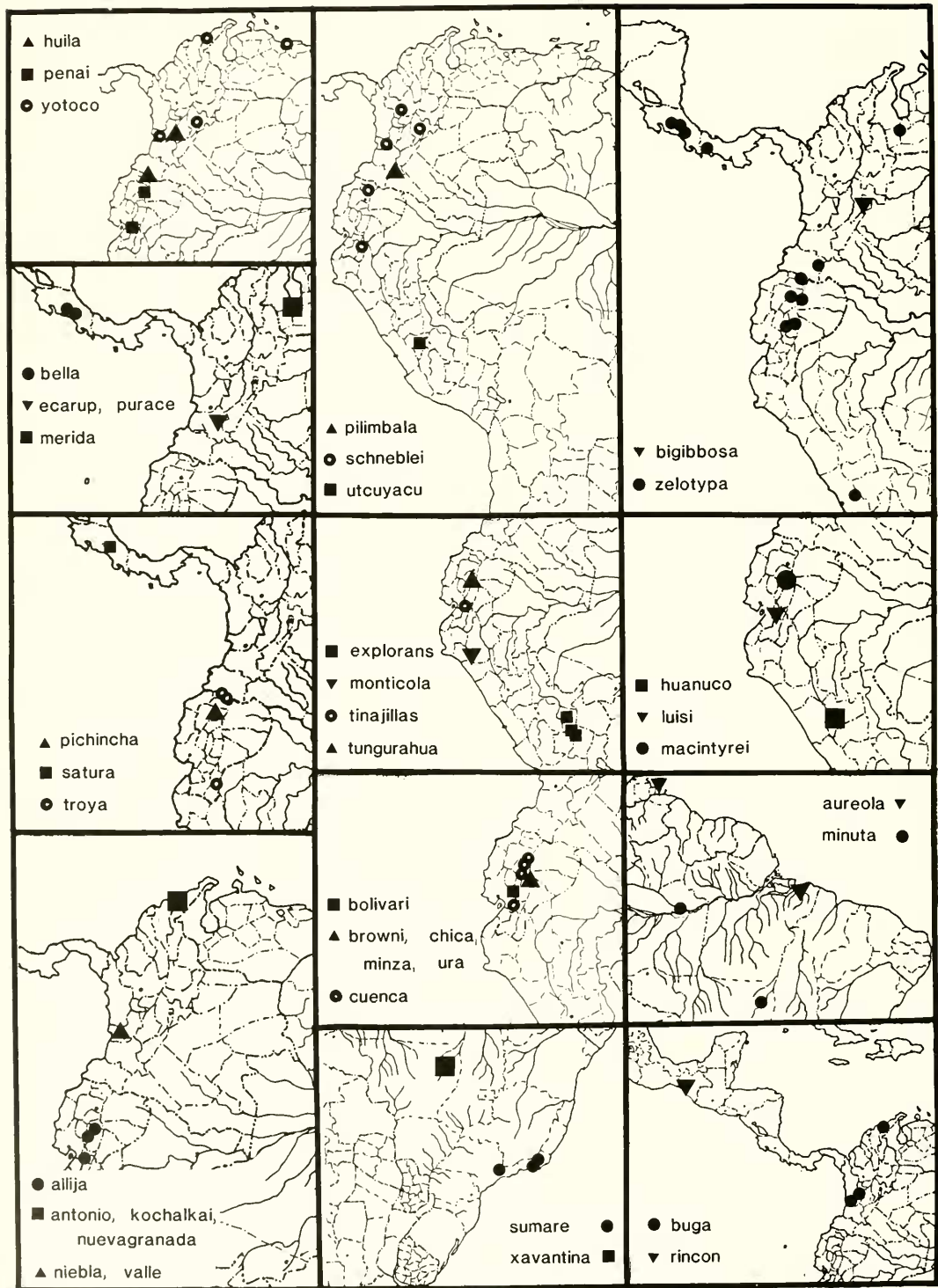
## KEY TO MALES

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-	Palpus as in Figures 633, 634; Lesser Antilles .....	<i>eugeni</i>
16(3).	Palpal tibia more than one and a half times length of palpal cymbium (Figs. 125, 126); Colombia .....	<i>keyserlingi</i>



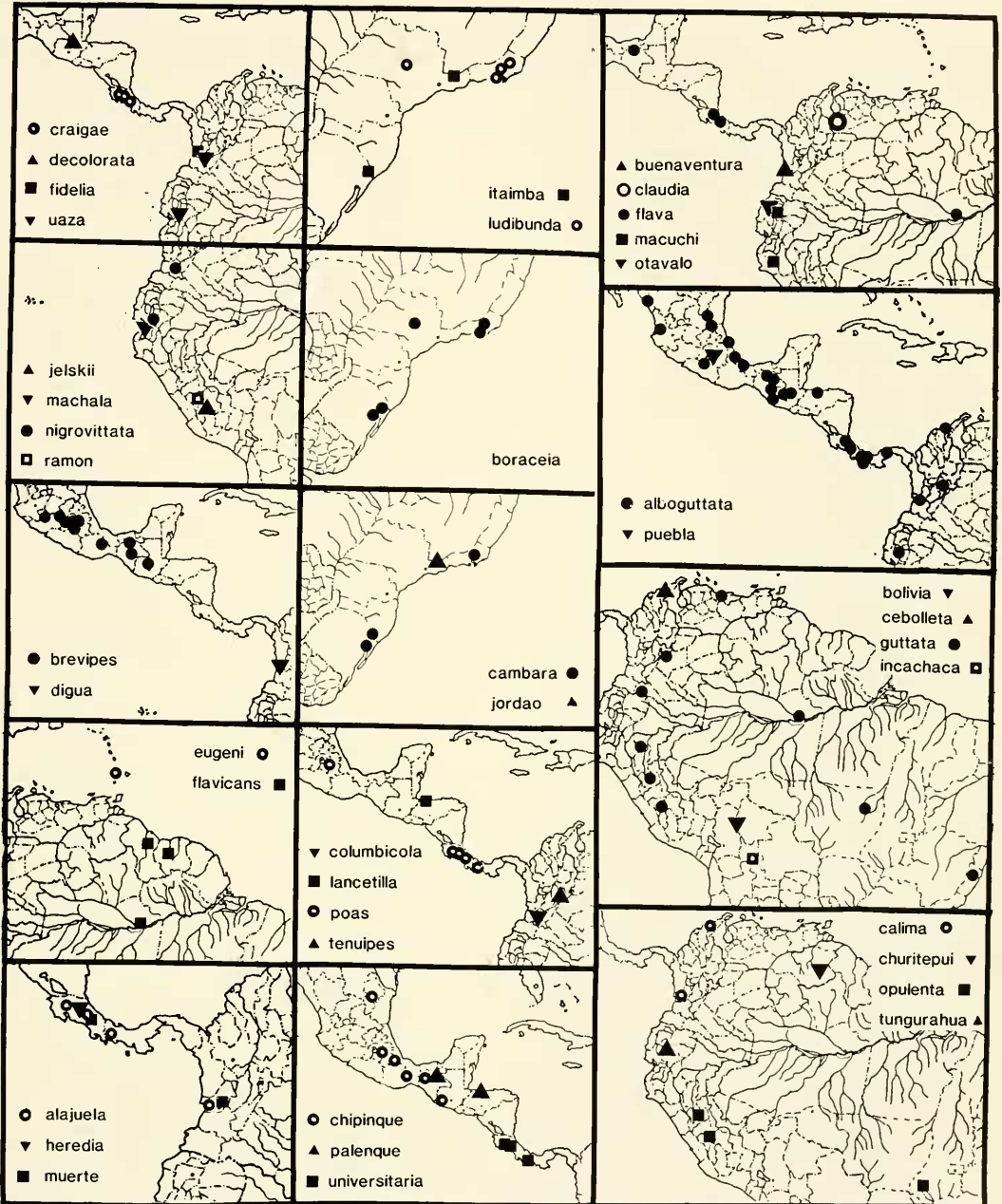
Map 2. Distribution of *Chrysometa* species.





Map 3. Distribution of *Chrysometa* species.





Map 4. Distribution of *Chrysometa* species.

-	Palpal tibia no more than one and a quarter times length of palpal cymbium .....	17	29(28).	Tip of conductor curved "up" at distal end (Fig. 299); Central America .....	<i>bella</i>
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23(22).	Conductor short, club-shaped in ventral view (Figs. 360, 371) .....	24	-	Cymbium with only small apophysis (Figs. 213, 214); Peru .....	<i>utcuyacu</i>
-	Conductor longer and of different shape (Figs. 328, 364) .....	25	36(34).	Coil of conductor and embolus wider than tegulum in ventral view (Fig. 197); Colombia .....	<i>saladito</i>
24(23).	Conductor small compared to area of tegulum visible in ventral view (Fig. 371); Ecuador .....	<i>minza</i>	-	Coil of conductor and embolus as wide or narrower than width of tegulum in ventral view (Fig. 506) .....	37
-	Conductor large compared to area of tegulum visible in ventral view (Figs. 360, 361); Ecuador .....	<i>cuenca</i>	37(36).	Paracymbium with 3 narrow arms in lateral view (Fig. 507); Colombia .....	<i>unicolor</i>
25(23).	Conductor overhanging and covering distal portion of tegulum in ventral view (Figs. 328, 406) .....	30	-	Paracymbium otherwise .....	38
-	Conductor above or behind tegulum in ventral view (Figs. 298, 386, 432) .....	26	38(37).	Conductor and embolus coil almost as wide as tegulum in ventral view (Figs. 528, 624) .....	39
26(25).	Tip of conductor with two points and a lobe (Fig. 387); Ecuador .....	<i>chica</i>	-	Conductor and embolus coil at most two-thirds width of tegulum (Figs. 111, 267) .....	46
-	Tip of conductor otherwise .....	27	39(38).	Paracymbium with 2 prongs in ventral view (Figs. 622, 624) .....	40
27(26).	Tip of conductor with hook at distal end (Figs. 364, 365); northern Peru .....	<i>monticola</i>	-	Paracymbium without lower prong in ventral view (Figs. 528, 616) .....	41
-	Tip of conductor otherwise .....	28	40(39).	Paracymbium with 2 arms (Fig. 622); southern Brazil .....	<i>cambara</i>
28(27).	Tip of conductor curved "down" at distal end (Fig. 430); Venezuela .....	<i>merida</i>	-	Paracymbium as in Figures 624, 625; Peru .....	<i>ramon</i>
-	Tip of conductor otherwise .....	29	41(39).	Paracymbium in lateral view with median prong as in Figure 617; Mexico .....	<i>chipinque</i>
			-	Paracymbium otherwise .....	42
			42(41).	A tooth at base of cymbium as seen in	

lateral view (Figs. 529, 575) .....	43
- Palpus otherwise .....	44
43(42). Palpus as in Figures 528, 529; Colombia, Ecuador .....	<i>nigrovittata</i>
- Palpus as in Figures 574, 575; south-eastern Brazil .....	<i>boraceia</i>
44(42). Paracymbium with a dorsal lobe facing cymbial apophysis (Fig. 627); Colombia .....	<i>columbicola</i>
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54(53). Paracymbium as in Figures 231, 232; southern Brazil .....	<i>aramba</i>
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55(52). Cymbium with two teeth as in Figure 184; Peru .....	<i>lepida</i>
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- 58(57). Paracymbium with slender ventral prong (Figs. 104, 105); Hispaniola ..... *maculata*  
 - Paracymbium with heavy ventral prong (Figs. 57, 58); Puerto Rico ..... *hamata*

### *Chrysometa pecki* new species Figures 23–26; Map 2

*Holotype.* Female holotype with three female paratypes from Drip Cave, 2.5 km SSE of Stewart Town, Trelawny Parish, Jamaica, 2 April 1968 (S. Peck, A. Fiske, AMNH). The species is named after the collector.

*Description.* Female. Carapace orange, head black except on sides, with black area narrowing to a point on thoracic depression; chelicerae dark brown. Sternum yellow, sides black; legs orange with contrasting black rings. Dorsum of abdomen black with spots left free of pigment; sides black; venter black with central light area and longitudinal light lines on each side. Anterior median eyes very large. Secondary eyes equal to 0.7 diameters of anterior median eyes. Anterior median eyes 0.3 diameters apart, 0.4 from laterals; posterior median eyes 0.4 diameters apart, their diameter from laterals. Clypeus height equal to 0.3 diameters of anterior median eye. Abdomen subspherical. Total length, 6.6 mm. Carapace, 3.0 mm long, 2.3 mm wide. First femur, 3.5 mm; patella and tibia, 4.5 mm; metatarsus, 3.1 mm; tarsus, 1.2 mm. Second patella and tibia, 3.6 mm; third, 1.7 mm; fourth, 2.7 mm.

*Variation.* Individual from Hardwar Gap is lighter, with smaller black dorsal spots than holotype.

*Diagnosis.* The shape of epigynum, its smooth venter, and sculptured posterior (Figs. 25, 26) easily separate this species from *C. fuscolimbata* and others.

*Paratypes.* JAMAICA Hardwar Gap, Jan. 1966, ♀ (R. Kern, AMNH).

### *Chrysometa fuscolimbata* (Archer), new combination Figures 27–31; Map 2

*Metagyra fuscolimbata* Archer, 1958: 5, fig. 10. Female holotype from Hardwar Gap, 1,600 m, Port-

land Parish, Jamaica (AMNH), examined. Brignoli, 1983: 230.

**Description.** Female. Carapace yellow with brown marks (Fig. 31); chelicerae, labium, endites orange-brown; sternum orange, sides darker brown. Legs yellow, with contrasting brown rings. Dorsum of abdomen with pattern of black spots on brown and only few widely scattered silver spots (Fig. 31); venter with trapezoidal light mark, narrower in front than behind, containing silver spots surrounded by black patches. Secondary eyes equal to 0.7 diameters of anterior medians. Anterior median eyes 0.6 diameters apart, 0.7 diameters from laterals. Posterior median eyes 0.7 diameters apart, 1.4 diameters from laterals. Clypeus height equal to 0.4 diameters of anterior median eyes. Abdomen subspherical. Total length, 7.5 mm. Carapace, 3.4 mm long, 2.5 mm wide. First femur, 4.3 mm; patella and tibia, 5.2 mm; metatarsus, 3.9 mm; tarsus, 1.5 mm. Second patella and tibia, 4.0 mm; third, 1.9 mm; fourth, 3.1 mm.

**Diagnosis.** The wide transverse bar of the epigynum and paired median posterior notches (Fig. 29), and two parallel grooves in posterior view (Fig. 30) separate this species from *C. pecki*.

**Record.** JAMAICA Main Range, Blue Mountains, 1,600–2,300 m, 17–19 Aug. 1934, ♀ (P. J. Darlington, MCZ).

### *Chrysometa yungas* new species Figures 32–36; Map 2

**Holotype.** Female holotype and immature male paratype from Chulumani, 1,700 m, Yungas, Dpto. La Paz, Bolivia, 17–25 Dec. 1955 (L. Peña, IRSNB). The specific name is a noun in apposition after the locality.

**Description.** Female. Carapace orange-white with dusky patch in center, black between anterior median eyes; sternum dark brown; legs orange. Dorsum of abdomen with tiny silver spots about their diameter apart; venter with transverse black mark, black on sides and around spinnerets (Fig. 36). Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, their diameter from laterals. Posterior median eyes 1.5 diameters apart, slightly more than their diameter from laterals. Legs long. Abdomen oval. Total length, 4.2 mm. Carapace, 1.6 mm long, 1.4 mm wide. First femur, 6.3 mm; patella and tibia, 5.7 mm; metatarsus, 6.4 mm; tarsus, 1.1 mm. Second patella and tibia, 2.9 mm; third, 1.2 mm; fourth, 1.8 mm.

**Diagnosis.** This species is distinguished from all others by having a gap on the posterior side of the transverse oval depression in ventral view of the epigynum (Fig. 34).

### *Chrysometa duida* new species Figures 37–40; Map 2

**Holotype.** Female from Cerro Duida, savanna hill, Est. Amazonas, Venezuela (G. Tate, AMNH). The specific name is a noun in apposition after the locality.

**Description.** Female. Carapace orange, dusky on margin of thorax; sternum black grading to orange in center; legs orange with indistinct dusky rings. Dorsum of abdomen with large silver spots, black patches on each shoulder grading into posterior band of black transverse marks. Venter with square median black patch; no distinct light lines. Anterior lateral eyes,

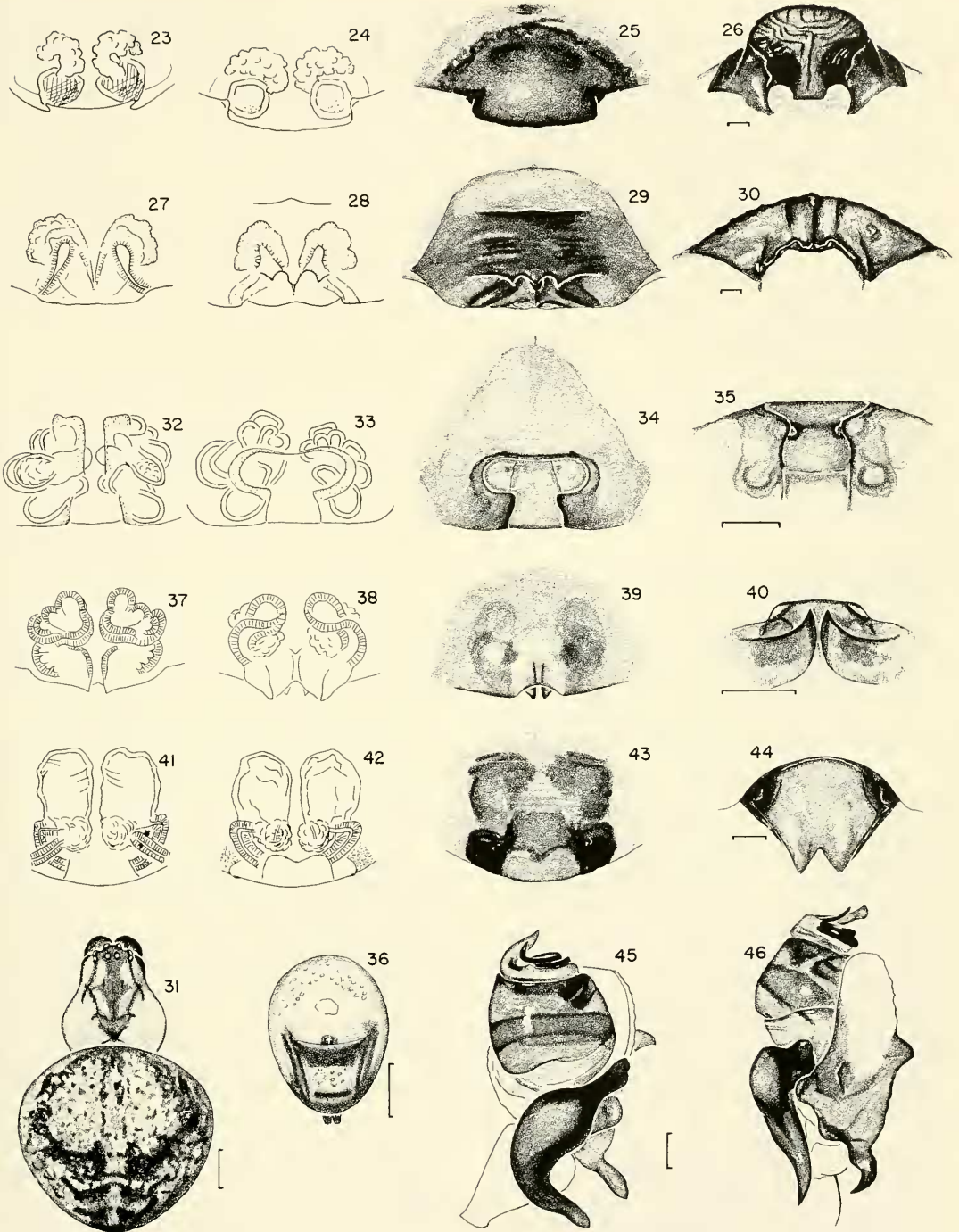
Figures 23–26. *Chrysometa pecki* n. sp., epigynum. 23. Dorsal, cleared. 24. Ventral, cleared. 25. Ventral. 26. Posterior.

Figures 27–31. *C. fuscolimbata* (Archer). 27–31. Epigynum. 27. Dorsal, cleared. 28. Ventral, cleared. 29. Ventral. 30. Posterior. 31. Female.

Figures 32–36. *C. yungas* n. sp. 32–35. Epigynum. 32. Dorsal, cleared. 33. Ventral, cleared. 34. Ventral. 35. Posterior. 36. Abdomen, ventral.

Figures 37–40. *C. duida* n. sp., epigynum. 37. Dorsal, cleared. 38. Ventral, cleared. 39. Ventral. 40. Posterior.





Figures 41-46. *C. cornuta* (Bryant). 41-44. Epigynum. 41. Dorsal, cleared. 42. Ventral, cleared. 43. Ventral. 44. Posterior. 45, 46. Male left palpus. 45. Ventral. 46. Lateral.

Scale lines. 0.1 mm, except Figures 31, 36, 1.0 mm.

posterior median eyes equal to 1.3 diameters of anterior medians; posterior lateral eyes 1.2 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, their diameter from laterals. Posterior median eyes slightly less than their diameter apart, same distance from laterals. Abdomen oval, spherical anterior half, pointed posteriorly. Total length, 3.0 mm. Carapace, 1.2 mm long, 1.0 mm wide. First femur, 1.7 mm; patella and tibia, 1.9 mm; metatarsus, 1.6 mm; tarsus, 0.7 mm. Second patella and tibia, 1.3 mm; third, 0.7 mm; fourth, 1.0 mm.

*Diagnosis.* The venter of the epigynum, showing only a pair of posterior points (Fig. 39), and the curved, pointed lateral lobes in posterior view (Fig. 40) separate this species from others.

*Chrysometa cornuta* (Bryant),  
new combination

Figures 41–46; Map 2

*Pseudometa cornuta* Bryant, 1945: 392, figs. 26–28, ♀, ♂. Male holotype, female paratype from Loma Vieja, Cordillera Central, south of Constanza, 6,000' [2,000 m], Dominican Republic (MCZ), examined. *Capichameta cornuta*:—Brignoli, 1983: 227.

*Description.* Female. Carapace, sternum orange-yellow. Legs orange-yellow, ends of articles brown. Abdomen orange-yellow, without marks. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes slightly more than their diameter apart, the same distance from laterals. Total length, 4.5 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.2 mm; patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 0.9 mm; fourth, 1.4 mm.

Male. Carapace with gray chevron on thorax, otherwise colored like female. Eyes subequal in size. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals.

Abdomen suboval. Total length, 3.4 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.7 mm; patella and tibia, 3.2 mm; metatarsus, 2.9 mm; tarsus, 1.1 mm. Second patella and tibia, 2.2 mm; third, 0.9 mm; fourth, 1.4 mm.

*Diagnosis.* The epigynum, unlike that of *C. saramacca*, has a dark patch on each side of the light field (Fig. 43). The male differs from others in having the distinct paracymbium swollen at the middle (Figs. 45, 46).

*Chrysometa saramacca* new species  
Figures 47–51; Map 2

*Holotype.* Female holotype from Voltzberg-Raleigh-vallen Nature Reserve, Saramacca Prov., Surinam, [04°32'N, 56°32'W], Feb. 1982 (D. Smith Trail, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow with black marks (Fig. 51); chelicerae yellow with basal black spot. Endites black proximally, with yellow sides; sternum black with five yellow patches anteriorly. Legs yellow, with contrasting narrow black rings. Dorsum of abdomen white with indistinct black marks anteriorly; venter with square black area, with longitudinal white line on each side, black patch on each side of epigynum and black ring around spinnerets. Carapace narrow in front. Secondary eyes equal to 0.4 diameters of anterior medians. Anterior median eyes almost touching, 0.3 diameters from laterals. Posterior median eyes 1.2 diameters apart, same distance from laterals. Abdomen oval. Total 4.4 mm. Carapace, 1.7 mm long, 1.2 mm wide. First femur, 2.3 mm; patella and tibia, 2.5 mm; metatarsus, 1.7 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.0 mm; fourth, 1.5 mm.

*Variation.* Total length varied from 3.0 to 4.4 mm among specimens from the type locality.

*Diagnosis.* The unique narrow head with large anterior median eyes raises a question whether this species is a *Chry-*

*someta*. It resembles species of *Dolichognatha* but, unlike *Dolichognatha*, has the posterior median eyes separated and lacks tubercles on the abdomen. It differs from *C. cornuta* by lacking a dark patch on each side of the light field of the epigynum (Fig. 49).

*Natural History, Distribution.* Low forest, Venezuela, Surinam, Amazonian Peru (Map 2).

*Paratypes.* VENEZUELA *Est. Bolívar*: 38 km E Ciudad Bolívar, 19 March 1982, ♀ (G. F., J. F. Hevel, USNM). PERU *Dpto. Huanuco*: Monson Vall., Tingo María, 26 Oct. 1954, ♀ (E. S. Ross, E. I. Schlinger, CAS).

*Chrysometa hamata* (Bryant)  
new combination

Figures 52–58; Map 2

*Pseudometa hamata* Bryant, 1942: 3, figs. 6, 8, 9, ♀, ♂. Male holotype, 3 female, one immature paratypes from El Yunque, 3,000 ft. [1,000 m], Puerto Rico (MCZ), examined.

*Capicbameta hamata*:—Brignoli, 1983: 227.

*Note.* Bryant's (1942) figure 8 is upside down.

*Description.* Female. Carapace orange-yellow, head darker, with dusky patch in thoracic region. Chelicerae dark. Sternum light orange-yellow. Legs with dark rings. Dorsum of abdomen with indistinct pattern (Fig. 56); venter with dark band between epigynum and spinnerets, bordered on each side by a white line. Anterior lateral eyes 0.8 diameters of anterior medians; posterior median eyes 0.8 diameters; posterior lateral eyes 0.6 diameters of anterior medians. Anterior median eyes 0.5 diameters apart, 0.7 from laterals; posterior median eyes 0.5 diameters apart, their diameter from laterals. Abdomen sub-spherical (Fig. 56). Total length 6.0 mm. Carapace, 2.3 mm long, 1.9 mm wide. First femur, 2.9 mm; patella and tibia, 3.7 mm; metatarsus, 2.4 mm; tarsus, 1.1 mm. Second patella and tibia, 2.7 mm; third, 1.4 mm; fourth, 2.2 mm.

Male. Coloration, eyes like female. Anterior median eyes 0.5 diameters apart,

0.5 diameters from laterals. Posterior median eyes 0.5 diameters apart, their diameter from laterals. Total length, 4.3 mm. Carapace, 2.2 mm long, 1.8 mm wide. First femur, 3.8 mm; patella and tibia, 4.8 mm; metatarsus, 3.9 mm; tarsus, 1.2 mm. Second patella and tibia, 3.7 mm; third, 1.4 mm; fourth, 2.2 mm.

*Variation.* Females vary in total length from 3.5 to 6.0 mm, males from 3.1 to 4.3 mm.

*Diagnosis.* The female differs from other species by having a median lobe bearing a keel in ventral view of the epigynum (Fig. 54). The male can be separated from *C. cornuta* by the smaller sized, more "horizontally" placed paracymbium (Figs. 57, 58).

*Natural History, Distribution.* Found in intermediate elevation forest in Puerto Rico (Map 2).

*Records.* PUERTO RICO Adjuntas, June 1915, ♀ (A. Petrunkevitch, AMNH); El Yunque Nat'l. For., 4 Nov. 1971, ♀ (J. Carico, JC); Luquillo For., Municipio de Naguabo, 30 Aug. 1980, 3♀, ♂ (J. Coddington, MCZ).

*Chrysometa sicki* new species

Figures 59–62; Map 2

*Holotype.* Female holotype with two juvenile paratypes from Teresópolis, 1,000 m, Est. Rio de Janeiro, Brazil, bamboo undergrowth, March 1946 (H. Sick, AMNH). This species is named after the collector.

*Description.* Female. Carapace, legs yellow; sternum yellow, dusky posteriorly. Dorsum of abdomen with white pigment spots, posteriorly with transverse dusky marks; venter with gray patch between epigynum and spinnerets. Lateral eyes equal to 1.2 diameters of anterior medians; posterior median eyes equal to 1.4 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, their diameter from laterals. Posterior median eyes 0.6 diameters apart, 0.8 diameters from laterals. Abdomen oval. Total length, 2.8 mm. Cara-



pace, 1.4 mm long, 0.9 mm wide. First femur, 1.8 mm; patella and tibia, 2.0 mm; metatarsus, 1.6 mm; tarsus, 0.8 mm. Second patella and tibia, 1.6 mm; third, 0.8 mm; fourth, 1.2 mm.

*Note.* This small specimen may be the female of *Chrysometa voluptabilis* (Keyserling).

*Diagnosis.* This species is smaller than *C. malkini*, has a secondary posterior lobe on each side of the median septum of the epigynum, and lacks a dark sclerotized patch on each side of the median septum (Fig. 61).

***Chrysometa malkini* new species**  
Figures 63–66; Map 2

*Holotype.* Female from Paramo Puracé, 15 km E of Puracé, 3,000 m, Dept. Cauca, Colombia, beating foliage, 20 Oct. 1968 (B. Malkin, AMNH). The species is named after the collector.

*Description.* Female. Carapace orange with symmetrical dark reticulations and light spot above thoracic depression; sternum dark brown; legs yellow-orange, indistinctly ringed. Dorsum of abdomen with large silver spots absent in midline, black marks on shoulders; posteriorly with transverse bars forming a median black band. Venter dusky with a fine line of silver spots on each side. Lateral eyes equal to 1.5 diameters of anterior medians; posterior medians equal to 1.6 diameters of anterior median eyes. Anterior median eyes 1.3 diameters apart, two diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.2 diameters from laterals. Abdomen subspherical, slightly longer than wide, with shoulder humps. Total length, 4.2 mm.

Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.3 mm; patella and tibia, 2.7 mm; metatarsus, 2.3 mm; tarsus, 0.9 mm. Second patella and tibia, 1.7 mm; third, 0.9 mm; fourth, 1.4 mm.

*Diagnosis.* *Chrysometa malkini* is larger than *C. sicki* and has a dark sclerotized patch on each side of the median septum (Fig. 65) of the epigynum.

***Chrysometa sabana* new species**  
Figures 67–70; Map 2

*Holotype.* Female holotype with one female paratype from forest between Hato Mayor and Sabana de la Mar, Dominican Republic, 20 July 1935 (W. G. Hassler, AMNH). The specific name is a noun in apposition after the locality.

*Description.* Female. Carapace, sternum orange; legs orange with black spots. Dorsum of abdomen with white pigment spots and black spots, posterior half with longitudinal dark band widest in front; venter black with longitudinal line of white spots on each side, and transverse white line in front of spinnerets. Eyes subequal in size. Anterior median eyes 0.6 diameters apart, their diameter from laterals. Posterior median eyes 0.5 diameters apart, their diameter from laterals. Abdomen subspherical. Total length, 6.0 mm. Carapace, 2.9 mm long, 2.1 mm wide. First femur, 3.4 mm; patella and tibia, 4.2 mm; metatarsus, 3.2 mm; tarsus, 1.1 mm. Second patella and tibia, 3.2 mm; third, 1.7 mm; fourth, 2.5 mm.

*Diagnosis.* The median septum of the epigynum is round and, unlike that of *C. keyserlingi*, lacks an anterior lip (Fig. 69). In posterior view the septum has a constriction dorsally (Fig. 70).

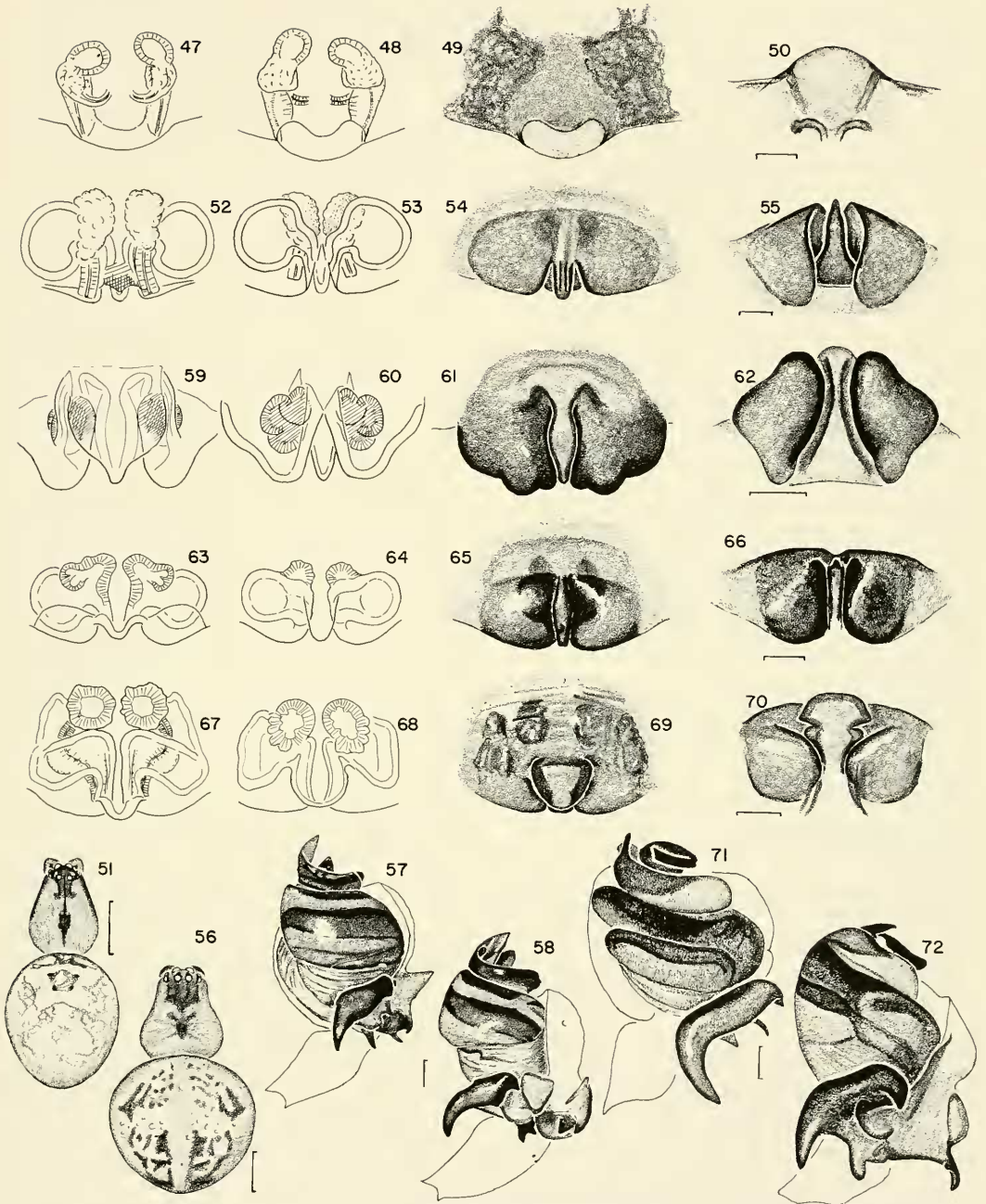
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Figures 47–51. *Chrysometa saramacca* n. sp. 47–50. Epigynum. 47. Dorsal, cleared. 48. Ventral, cleared. 49. Ventral. 50. Posterior. 51. Female.

Figures 52–58. *C. hamata* (Bryant). 52–55. Epigynum. 52. Dorsal, cleared. 53. Ventral, cleared. 54. Ventral. 55. Posterior. 56. Female. 57, 58. Left male palpus. 57. Ventral. 58. Lateral.

Figures 59–62. *C. sicki* n. sp., epigynum. 59. Posterodorsal, cleared. 60. Anteroventral, cleared. 61. Ventral. 62. Posterior.





Figures 63-66. *C. malkini* n. sp., epigynum. 63. Dorsal, cleared. 64. Ventral, cleared. 65. Ventral. 66. Posterior.

Figures 67-70. *C. sabana* n. sp., epigynum. 67. Dorsal, cleared. 68. Ventral, cleared. 69. Ventral. 70. Posterior.

Figures 71, 72. *C. raripila* (Keyserling), male palpus. 71. Ventral. 72. Lateral.

Scale lines. 0.1 mm, except Figures 51, 56, 1.0 mm.

***Chrysometa raripila* (Keyserling),  
new combination****Figures 71, 72; Map 2***Argyropeira raripila* Keyserling, 1893: 354. pl. 18, fig. 261. ♂. Male from Fazenda Calvarion near Rio de Janeiro, Brazil (BMNH), examined.*Meta raripila*:—Roewer, 1942: 920. Bonnet, 1957: 2797 (in part). Not Petrunkevitch, 1930: 339.

**Description.** Male holotype. Carapace yellow-white with median brown band, narrow at thoracic depression and as wide as posterior median eyes in front. Sternum black. Legs yellow-white. Dorsum of abdomen with posterior transverse dark marks; sides with some silver dots; venter with some black pigment. Eyes subequal in size. Anterior median eyes 0.6 diameters apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Total length 3.0 mm. Carapace 1.7 mm long, 1.3 mm wide. First femur, 3.0 mm; patella and tibia, 3.7 mm; metatarsus, 3.2 mm; tarsus, 1.0 mm. Second patella and tibia, 2.6 mm; third, 1.0 mm.

**Diagnosis.** The T-shape of the paracymbium (Fig. 72) distinguishes this male from others.

***Chrysometa linguiformis* (Franganillo),  
new combination****Figures 73–77; Map 2***Meta linguiformis* Franganillo, 1930: 20. Six females from Sierra Maestra, Cuba, lost. Franganillo, 1936: 94, fig. 47, ♀. Bonnet, 1957: 2787.*Pseudometa linguiformis*:—Bryant, 1940: 353, fig. 128, ♀.*Capichameta linguiformis*:—Brignoli, 1983: 227.

**Description.** Female from Jamaica. Carapace yellow with black marks (Fig. 77); sternum yellow; legs yellow with black spots, fused on underside of first and second femora into longitudinal lines. Dorsum of abdomen gray with black marks and indistinct white spots; venter black with white line on each side. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Posterior median eyes their diameter

apart, 1.5 diameters from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 1.8 mm long, 1.5 mm wide. First femur, 2.0 mm; patella and tibia, 2.7 mm; metatarsus, 2.1 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 1.1 mm; fourth, 1.6 mm.

**Variation.** Total length of females varies between 4.2 and 5.6 mm.

**Diagnosis.** This species differs from *C. jayuyensis* by lacking a frame around the median round knob in the epigynum (Fig. 75) and differs from *C. guadeloupensis* by having in posterior view a constriction between the knob and median plate (Fig. 76). In *C. guadeloupensis*, the median plate is separate from the knob.

**Distribution.** Cuba, Jamaica (Map 2).

**Records.** CUBA Siboney, shrubs, 26 June 1955, 2♀ (A. F. Archer, AMNH); Gran Piedra, 2 June 1955, 2♀, 29 June 1955, ♀ (A. F. Archer, AMNH); Pan de Palenque, Matanzas, 11 Aug. 1955, 3♀ (A. F. Archer, AMNH); Vega Alta, ♀ (P. Bermudez, CUC); San José, ♀ (MCZ). JAMAICA *St. Ann's Parish*: White River, E of Ocho Rios, coralline limestone, Jan. 1968, ♀ (G. K. Reid, MCZ).

***Chrysometa jayuyensis* (Petrunkevitch),  
new combination****Figures 78–84; Map 2***Meta raripila*:—Petrunkevitch, 1930: 339, figs. 227–229, ♂. Not *raripila* Keyserling. Misidentification.*Meta jayuyensis* Petrunkevitch, 1930: 343. Two female syntypes from coffee plantation at Jayuya, 18°12'N, 66°36'W, 1,150 m el. and one from Bayamón, Puerto Rico (PMY), examined. Roewer, 1942: 919. Bonnet, 1957: 2787.

**Description.** Female. Carapace yellow-white with gray marks; sternum yellow-white; legs yellow-white with black spots on ventral side. Dorsum of abdomen yellow-white with black marks (Fig. 82) and white pigment spots; venter with gray patch between epigynum and spinnerets, longitudinal gray line on each side with white pigment spots between. Anterior lateral eyes equal to diameter of anterior median eyes; posterior median eyes 1.2

diameters; posterior lateral eyes 0.9 diameters of anterior median eyes. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, slightly more than their diameter from laterals. Total length, 4.3 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 2.2 mm; patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

**Male.** Coloration like female. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, slightly less than their diameter from laterals. Posterior median eyes 0.6 diameters apart, slightly more than their diameter from laterals. Clypeus height 0.7 diameters of anterior median eyes. First femora ventrally with strong macrosetae on tubercles. Abdomen oval. Total length, 3.0 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.7 mm; patella and tibia, 3.1 mm; metatarsus, 2.5 mm; tarsus, 0.8 mm. Second patella and tibia, 2.1 mm; third, 0.8 mm; fourth, 1.3 mm.

**Variation.** Females vary from 3.0 to 4.8 mm total length, males 2.7 mm to 3.2 mm.

**Diagnosis.** Females can be separated from *C. linguiformis* and *C. guadeloupensis* by having the median knob of the epigynum framed by a fold anteriorly and having a swelling on each side posteriorly (Fig. 80).

**Natural History.** Specimens were found in a coffee plantation at Jayuya.

**Records.** PUERTO RICO Guainabo, Oct. 1925, ♀ (A. Petrunkevitch, PMY); Mayagüez, University Farm, 21 Jan. 1962, ♀, 2 Feb. 1964, ♂, Oct. 1964, 3♂ (A. M. Chickering, MCZ); Monte el Estado, Maricao, 9 Jan. 1964, ♂ (A. M. Chickering, MCZ); Bosque Estatal, Maricao, July 1950, 3♀ (A. F. Archer, AMNH); Vivevero de Catalina, Palmer, 17 Feb. 1961, ♀ (A. M. Nadler, AMNH); Maricao, 13 Feb. 1961, ♂ (A. M. Nadler, AMNH); Cafetales, 600–700 m, Castañer, Cord. Central, 22 Aug. 1957, 4♀ (A. F. Archer, AMNH); Salto

Collazo, betw. San Sebastian and Lares, 30 July 1950, ♂ (A. F. Archer, AMNH); Aiboneto, 1 June 1915, ♂ (A. Petrunkevitch, AMNH), Jayuya, ca. 1,000 m, 20–26 March 1986, 6♀ (H. L. Levi, MCZ).

### *Chrysometa guadeloupensis* new species Figures 85–89; Map 2

**Holotype.** Female holotype, one juvenile paratype in poor condition from Bains Jaunes, in high woods, Guadeloupe, Lesser Antilles, 15 Aug. 1925 (A. Petrunkevitch, PMY). The specific name is an adjective after the type locality.

**Description.** Female. Carapace yellow-white with brown head (Fig. 89); chelicerae brown; sternum yellow-white; legs with dark rings. Dorsum of abdomen with paired brown marks (Fig. 89), lighter areas with white pigment spots; venter brown with pair of longitudinal light bands. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, slightly less than their diameter from laterals. Posterior median eyes slightly less than their diameter apart, their diameter from laterals. Abdomen spherical. Total length, 5.0 mm. Carapace, 2.4 mm long. First femur, 3.3 mm; patella and tibia, 4.0 mm; metatarsus, 2.9 mm; tarsus, 1.2 mm. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth, 2.2 mm.

**Diagnosis.** This species differs from *C. linguiformis* by having the posterior median plate of the epigynum separate from the median knob (Fig. 88).

### *Chrysometa butamalal* new species Figures 90–94; Map 2

**Holotype.** Female from Butamalal, 1,100–1,300 m [37°54'S, 73°12'W, Prov. Arauco], Chile, 31 Jan. 1954 (L. Peña, IRSNB). The specific name is a noun in apposition after the locality.

**Description.** Female. Carapace light orange, head brown, brown area coming to a point on thorax, thoracic rim dusky; sternum dusky brown; legs light orange, indistinctly ringed. Dorsum of abdomen with paired silver spots anteriorly and paired black patches on orange-brown (Fig. 94); sides with scattered silver spots;



venter blackish with two longitudinal lines of silver spots. Eyes subequal in size. Anterior median eyes 0.7 diameters apart, 0.8 diameters from laterals. Posterior median eyes their diameter apart, same distance from laterals. Abdomen oval. Total length, 5.0 mm. Carapace, 1.9 mm long, 1.6 mm wide. First femur, 2.7 mm; patella and tibia, 3.4 mm; metatarsus, 2.4 mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.3 mm; fourth, 1.9 mm.

**Diagnosis.** This species differs from the West Indian *C. linguiformis*, *C. guadeloupensis* and *C. jayuyensis* by having in ventral view the median knob anteriorly attached (Fig. 92) and by having in posterior view no constriction between knob and the median plate (Fig. 93).

#### *Chrysometa plana* new species

Figures 95–98; Map 2

**Holotype.** Female from south of Cuenca, 2,500–2,800 m el., Prov. Azuay, Ecuador, 15 March 1965 (L. Peña, MCZ). The specific name is an arbitrary combination of letters.

**Description.** Female. Carapace orange-yellow, gray in middle; sternum black; legs orange-yellow. Dorsum of abdomen with white spots and a wide longitudinal black band on posterior half. Venter black with longitudinal line of silver spots on each side. Secondary eyes equal to 1.2 diameters of anterior median eyes. Anterior median eyes their diameter apart, 1.4 diameters from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 1.6 mm long, 1.2 mm

wide. First femur, 2.3 mm; patella and tibia, 2.9 mm; metatarsus, 2.5 mm; tarsus, 1.0 mm. Second patella and tibia, 1.9 mm; third, 0.9 mm; fourth, 1.5 mm.

**Diagnosis.** The ventral view of the epigynum, a flat plate with anterior and lateral lips and two posterior lobes (Fig. 97), separates this species from others.

#### *Chrysometa maculata* (Bryant), new combination

Figures 99–105; Map 2

***Metargyra maculata*** Bryant, 1945: 388, fig. 15, ♀. Female holotype from Ennery, Haiti (MCZ), examined. Brignoli, 1983: 230

**Description.** Female. Carapace, sternum orange-yellow. Legs orange-yellow with dark spots on underside. Dorsum of abdomen with dark spots (Fig. 103); sides with indistinct spots; venter with indistinct dark mark on anterior half of area between epigynum and spinnerets. Anterior lateral eyes, posterior median eyes equal to diameter of anterior median eyes; posterior lateral eyes 0.8 diameters of anterior median eyes. Anterior median eyes 0.9 diameters apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen almost spherical. Total length, 5.0 mm. Carapace, 2.7 mm long, 2.2 mm wide. First femur, 3.2 mm; patella and tibia, 4.1 mm; metatarsus, 2.9 mm; tarsus, 1.2 mm. Second patella and tibia, 3.2 mm; third, 1.6 mm; fourth, 2.5 mm.

**Male.** Coloration like female, except chelicerae dark brown. Eyes subequal in size. Anterior median eyes 0.9 diameters apart, 0.5 diameters from laterals. Posterior median eyes 0.5 diameters apart, their

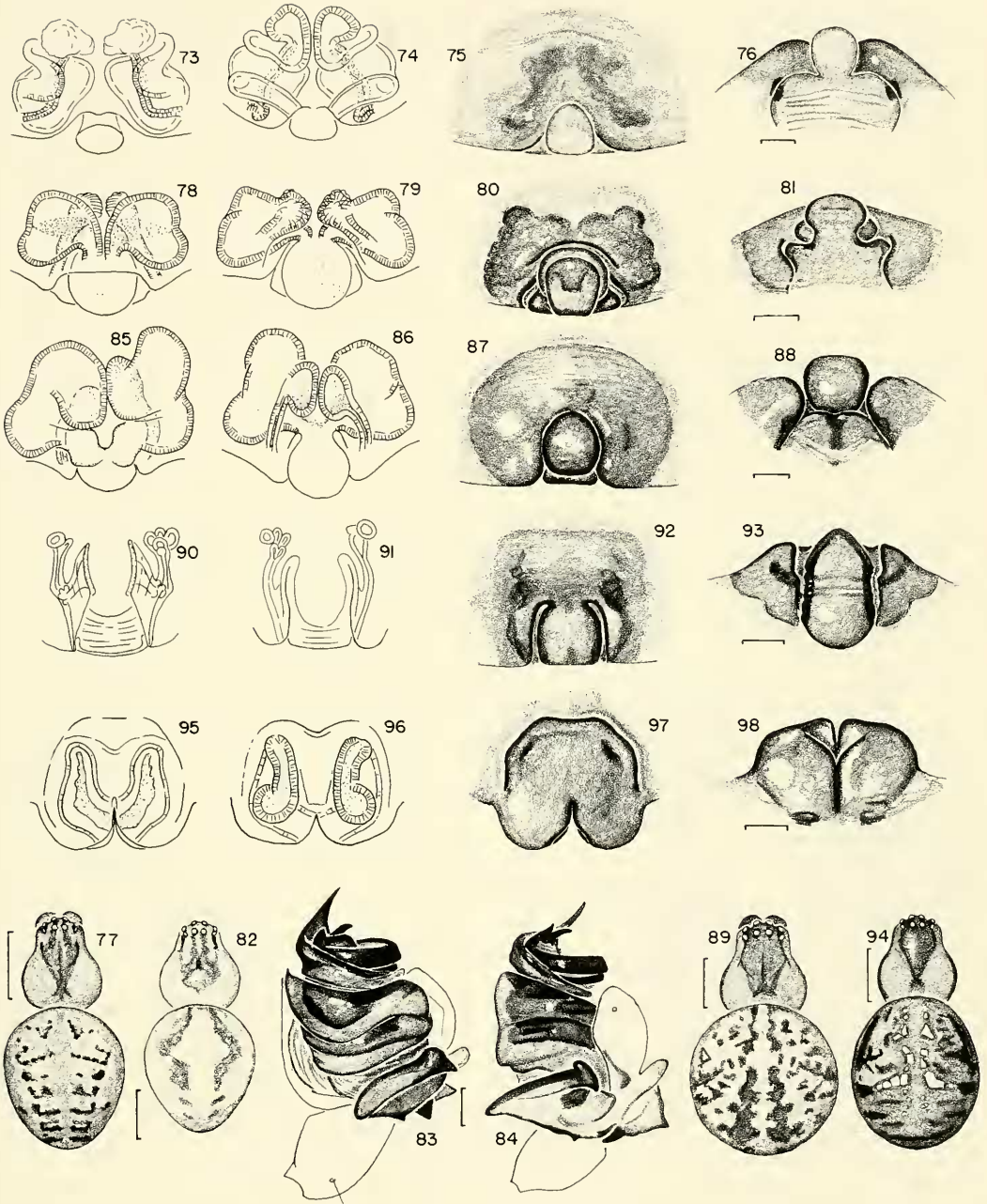
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Figures 73–77. *Chrysometa linguiformis* (Franganillo). 73–76. Epigynum. 73. Dorsal, cleared. 74. Ventral, cleared. 75. Ventral. 76. Posterior. 77. Female.

Figures 78–84. *C. jayuyensis* Petrunkevitch. 78–81. Epigynum. 78. Dorsal, cleared. 79. Ventral, cleared. 80. Ventral. 81. Posterior. 82. Female. 83, 84. Left male palpus. 83. Ventral. 84. Lateral.

Figures 85–89. *C. guadeloupensis* n. sp. 85–88. Epigynum. 85. Dorsal, cleared. 86. Ventral, cleared. 87. Ventral. 88. Posterior. 89. Female.





Figures 90-94. *C. butamalal* n. sp. 90-93. Epigynum. 90. Dorsal, cleared. 91. Ventral, cleared. 92. Ventral. 93. Posterior. 94. Female.

Figures 95-98. *C. plana* n. sp., epigynum. 95. Dorsal, cleared. 96. Ventral, cleared. 97. Ventral. 98. Posterior.

Scale lines. 0.1 mm, except Figures 77, 82, 89, 94, 1.0 mm.

diameter from laterals. Legs with strong macrosetae and short, immovable black spines on underside. Total length, 4.4 mm. Carapace, 2.3 mm long, 1.9 mm wide. First femur, 4.2 mm; patella and tibia, 5.4 mm; metatarsus, 4.2 mm; tarsus, 1.3 mm. Second patella and tibia, 4.1 mm; third, 1.5 mm; fourth, 2.3 mm.

*Variation.* Total length of females varied between 5.0 and 7.4 mm, of males between 4.4 and 5.8 mm.

*Diagnosis.* Females differ from other species by the vase-shaped septum of the epigynum having openings anterior on the sides (Fig. 101). The male differs from others by the relatively wide tegulum (in ventral view, Fig. 104), the hook-shaped apophysis of the cymbium and the paracymbium with a long, medially pointing "lower" prong (Figs. 104, 105).

*Records.* DOMINICAN REPUBLIC Cord. Central, Constanza to Garabacoa, 600–1,200 m, Aug. 1938, ♀ (P. J. Darlington, MCZ); Loma Cibao, Cord. Central, La Vega, 1,200–1,700 m, 9 Aug. 1958, ♀, ♂ (A. F. Archer, AMNH). HAITI 40 km from Aux Cayes, 600–1,000 m, 29 Aug. 1935, ♀, ♂ (W. C. Hassler, AMNH).

*Chrysometa distincta* (Bryant),  
new combination

Figures 106–112; Map 2

*Pseudometa distincta* Bryant, 1940: 352, figs. 121, 127. Male holotype and female paratype from south side of Pico Turquino, 3,000–5,000 ft. [1,000–1,600 m], Cuba (MCZ), examined.

*Capichameta distincta*—Brignoli, 1983: 227.

*Note.* Bryant (1940) fig. 127 is printed upside down.

*Description.* Female. Carapace orange-yellow with black V-shaped mark (Fig. 110). Sternum orange-yellow. Legs or-

ange-yellow, ends of articles dark, first and second femora with black patches on anterior. Dorsum of abdomen with paired gray marks and widely scattered silver spots; venter black between epigynum furrow and spinnerets, with black ring around spinnerets. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes their diameter apart, their diameter from laterals. Abdomen ovoid. Total length, 3.6 mm. Carapace, 1.7 mm long, 1.3 mm wide. First femur, 1.6 mm; patella and tibia, 2.3 mm; metatarsus, 1.3 mm; tarsus, 0.6 mm. Second patella and tibia, 1.7 mm; third, 1.1 mm; fourth, 1.4 mm.

Male. Color and structure like female. Total length, 2.6 mm. Carapace, 1.4 mm long, 1.0 mm wide. First femur, 1.8 mm; patella and tibia, 2.2 mm; metatarsus, 1.8 mm; tarsus, 0.8 mm. Second patella and tibia, 1.7 mm; third, 0.9 mm; fourth, 1.2 mm.

*Diagnosis.* The triangular shape of the septum and transverse bar of the epigynum (Fig. 108) and lobes on each side of the median plate in posterior view (Fig. 109) distinguish females. The male palpus differs by the tightly coiled, relatively short embolus and a long, laterally pointed "lower" prong of the paracymbium (Figs. 111, 112).

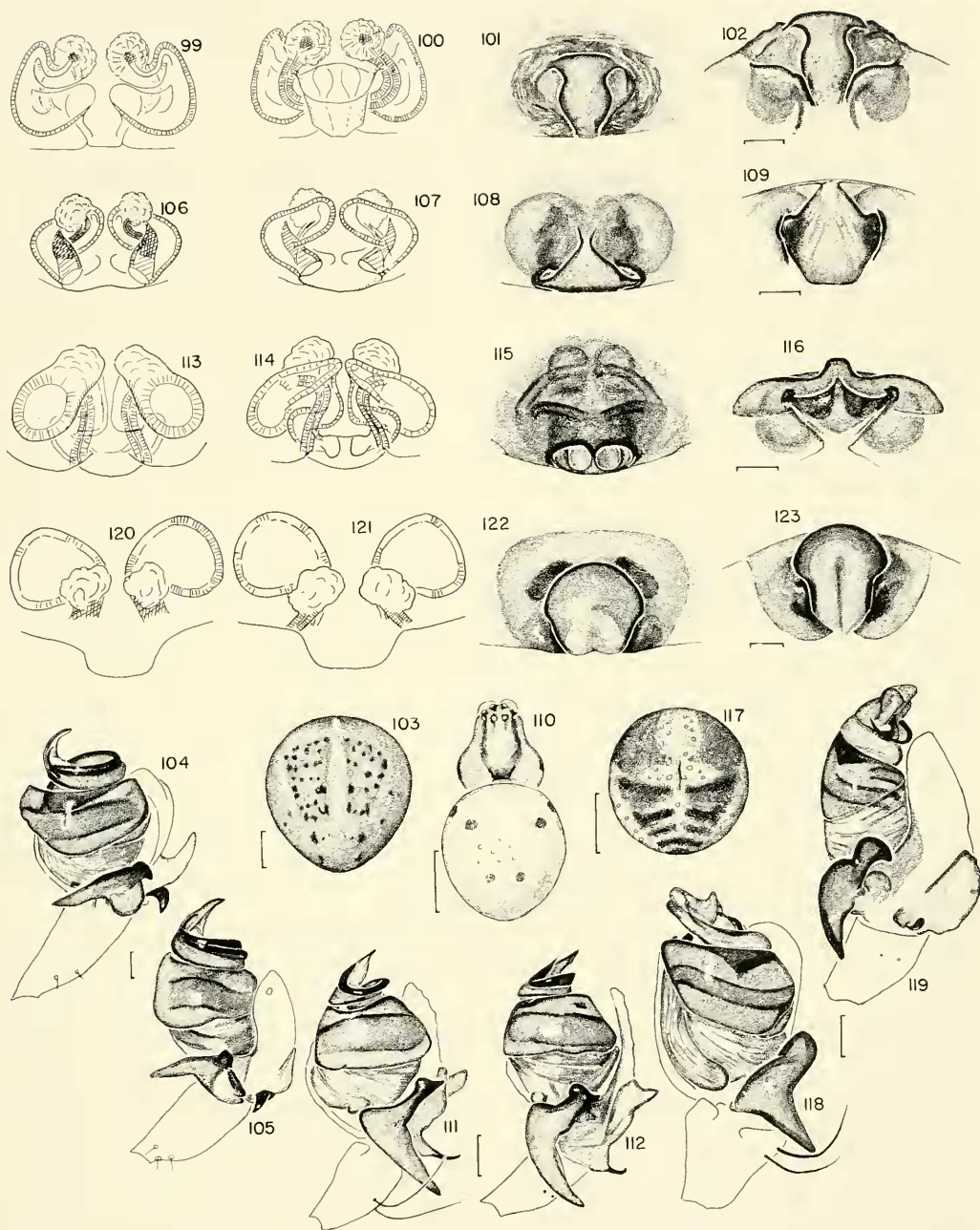
*Chrysometa nuboso* new species

Figures 113–119; Map 2

*Holotype.* Male holotype and three female paratypes from Bosque Nuboso, Monteverde Cloud Forest Reserve, 580 m el., Prov. Puntarenas, Costa Rica, 22 July 1979 (C. L. Craig, P. K. Klass, MCZ). The specific name is a noun apposition after the type locality.

Figures 99–105. *Chrysometa maculata* (Bryant). 99–102. Epigynum. 99. Dorsal, cleared. 100. Ventral, cleared. 101. Ventral. 102. Posterior. 103. Female abdomen, dorsal. 104, 105. Left male palpus. 104. Ventral. 105. Lateral.

Figures 106–112. *C. distincta* (Bryant). 106–109. Epigynum. 106. Dorsal, cleared. 107. Ventral, cleared. 108. Ventral. 109. Posterior. 110. Female. 111, 112. Male palpus. 111. Ventral. 112. Lateral.



Figures 113–119. *C. nuboso* n. sp. 113–116. Epigynum. 113. Dorsal, cleared. 114. Ventral, cleared. 115. Ventral. 116. Posterior. 117. Female abdomen, dorsal. 118, 119. Male palpus. 118. Ventral. 119. Lateral.

Figures 120–123. *C. keyserlingi* n. sp., epigynum. 120. Dorsal, cleared. 121. Ventral, cleared. 122. Ventral. 123. Posterior.

Scale lines. 0.1 mm, except Figures 103, 110, 117, 1.0 mm.



*Description.* Female. Carapace, sternum, legs yellow; distal ends of leg articles darker. Dorsum of abdomen with white pigment spots and indistinct transverse dark marks on posterior (Fig. 117). Anterior lateral eyes, posterior median eyes equal to diameter of anterior medians; posterior lateral eyes 0.8 diameters of anterior medians. Anterior median eyes 0.8 diameters apart, 0.6 diameters from laterals. Posterior median eyes 0.6 diameters apart, their diameter from laterals. Abdomen spherical. Total length, 3.6 mm. Carapace, 2.0 mm long, 1.4 mm wide. First femur, 2.3 mm; patella and tibia, 2.9 mm; metatarsus, 2.2 mm; tarsus, 1.1 mm. Second patella and tibia, 2.0 mm; third, 1.1 mm; fourth, 1.4 mm.

Male. Carapace yellow, posteriorly dusky in middle; head orange. Sternum, legs yellow. Dorsum of abdomen with some gray on sides. Anterior lateral eyes and posterior median eyes equal to diameter of anterior medians; posterior laterals 0.8 diameters of anterior median eyes. Anterior median eyes 0.8 diameters apart, 0.6 from laterals. Posterior median eyes 0.7 diameters apart, their diameter from laterals. Total length, 4.0 mm. Carapace, 2.2 mm long, 1.7 mm wide. First femur, 3.6 mm; patella and tibia, 4.3 mm; metatarsus, 3.8 mm; tarsus, 1.3 mm. Second patella and tibia, 3.0 mm; third, 1.3 mm; fourth, 1.9 mm.

*Variation.* Total length of females varies from 3.6 to 4.0 mm, males from 3.4 to 3.8 mm.

*Diagnosis.* The epigynum distinguishes this species by the septum whose anterior lateral margins continue laterally to frame the depression and by the posterior transverse bar which turns anterior and widens on each side (Fig. 115). In ventral view the "lower" prong of the paracymbium is pointed and at an angle (Fig. 118), in lateral view the "upper" prong is curved (Fig. 119).

*Paratypes.* COSTA RICA *Prov. Puntarenas*: Monteverde, cloud forest, 1,580–1,600 m, 1977–1978, 9 collections, 8♀, 2♂ (C. L. Craig, P. Klass, MCZ, AMNH,

BMNH, USNM, SMF); Monteverde, Guindon property, around house, 580 m, July 1978, 2♀, ♂ (C. L. Craig, P. Klass, MCZ).

### *Chrysometa keyserlingi* new species Figures 120–126; Map 2

*Holotype.* Male from San Javier, San Pedro, 1,560 m, Sierra Nevada de Santa Marta, Dpto. Magdalena, Colombia, 29 March 1975 (J. A. Kochalka, MCZ). This species is named after Count E. Keyserling, who named many species of *Chrysometa*.

*Description.* Female. Carapace, sternum, legs yellow. Abdomen with large silver spots and a scattering of tiny black pigment spots (Fig. 124). Posterior median and anterior lateral eyes 1.2 diameters of anterior medians, posterior laterals subequal. Anterior median eyes their diameter apart, 1.2 from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 from laterals. The abdomen is narrow oval (Fig. 124). Total length 4.5 mm, carapace 2.1 mm long, 1.7 mm wide. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth, 2.2 mm.

Male. Carapace, sternum, legs yellow-white, black on each side of thorax; first coxa and femur black except for distal end. Dorsum of abdomen with black marks and scattered silver spots; venter yellow with some silver spots. Lateral eyes equal to 0.8 diameters of anterior medians; posterior median eyes equal to diameter of anterior median eyes. Anterior median eyes their diameter apart, 0.7 diameters from laterals. Posterior median eyes their diameter apart, slightly less than their diameter from laterals. Abdomen elongate, slightly constricted in middle. Total length, 3.7 mm. Carapace, 1.7 mm long, 1.3 mm wide. First femur, 5.8 mm; patella and tibia, 7.2 mm; metatarsus, 7.9 mm; tarsus, 1.8 mm. Second patella and tibia, 3.9 mm; third, 1.7 mm; fourth, 2.7 mm.

*Diagnosis.* The female differs from other species with a round median knob-like septum in the epigynum (Fig. 122) by having a lateral constriction and a median groove on the posterior face of the median

plate (Fig. 123). The male is distinguished from others by the long palpal tibia and a wide, distally notched conductor (Figs. 125, 126).

*Note.* Male and female were collected together 40 km SW Mooka, Colombia.

*Natural History, Distribution.* Found at intermediate altitudes, northern and central Colombia (Map 2).

*Paratypes.* COLOMBIA Bogotá, ♀ (with syntypes of *C. rubromaculata*, BMNH). Dpto. Nariño: 40 km SW Mooka, 3 March 1955, ♀, ♂ (E. S. Ross, E. I. Schlinger, CAS).

### *Chrysometa donachui* new species

Figures 127–133; Map 2

*Holotype.* Female with male and one female paratypes from Río Donachui, 4,000 m, timberline, Sierra Nevada de Santa Marta, Colombia, 18 Jan. 1974 (J. A. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow with black V-shaped mark; sternum black; legs ringed. Dorsum of abdomen with black marks (Fig. 131), no silver spots; venter black with colorless longitudinal line on each side. Secondary eyes equal to 1.2 diameters of anterior median eyes. Anterior median eyes 1.3 diameters apart, same distance from laterals. Posterior median eyes their diameter apart, 1.2 diameters from laterals. Abdomen subspherical. Total length, 4.6 mm. Carapace, 1.8 mm long, 1.5 mm wide. First femur, 2.8 mm; patella and tibia, 3.4 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 2.3 mm; third, 1.1 mm; fourth, 1.7 mm.

Male. Coloring, eye position like female. Total length, 4.0 mm. Carapace, 2.0 mm long, 1.6 mm wide. First femur, 3.7 mm; patella and tibia, 4.7 mm; metatarsus, 4.5 mm; tarsus, 1.3 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.1 mm.

*Diagnosis.* The epigynum of *C. donachui* differs from that of *C. marta* and *C. sondo* in having anteriorly on each side of the median knob an opening surrounded by a lip (Fig. 129). The male can be sep-

arated from others by the relatively short embolus of the palpus and by the paracymbium having three curved teeth (Figs. 132, 133).

*Records.* COLOMBIA Dpto. Magdalena, Sierra Nevada de Santa Marta: Casa Antonio, Loma Cebolleta, 2,700 m, low vegetation, 8 May 1975, 8♀, ♂ (MCZ), 15 Feb. 1974, ♀ (AMNH); Loma Cebolleta, 3,500 m, 9 May 1975, ♂ (BMNH); Río Donachui, 2,800 m, 2 Jan. 1975, ♀ (BMNH) Río Donachui, 3,000 m, 19 Jan. 1974, ♀ (IBNA); Cerro Cinaí, 2,500 m, 27 April 1975, ♀ (USNM); 2,600 m, 26 April 1975, ♀ (IBNA); nr. Lower Twin Lake, Que. el Chorro, 3,600 m, 3 March 1975, ♂ (AMNH); old hut, Serra Nueva Granada, 2,500 m, 26 April 1975, 2♀, 2♂ (MCZ, all J. A. Kochalka).

### *Chrysometa marta* new species

Figures 134–137; Map 2

*Holotype.* Female from Casa Antonia, Loma Cebolleta, 2,700 m, Sierra Nevada de Santa Marta, Dpto. Magdalena, Colombia, 15 Feb. 1974 (J. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace orange with dark V-shaped mark on thoracic depression; sternum orange; legs orange-white. Dorsum of abdomen orange-white with black patch on shoulders continuing posteromedially into black line, posteriorly with median black band with parallel margins; venter without markings. Eyes subequal in size. Anterior median eyes 1.2 diameters apart, 2 diameters from laterals. Posterior median eyes 1.2 diameters apart, 1.5 diameters from laterals. Abdomen subspherical. Total length, 4.0 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.0 mm; patella and tibia, 2.3 mm; metatarsus, 2.1 mm; tarsus, 0.8 mm. Second patella and tibia, 1.5 mm; third, 0.8 mm; fourth, 1.2 mm.

*Diagnosis.* *Chrysometa marta* differs from *C. sondo* and *C. donachui* by having the opening located anteriolaterally of the median knob behind a transverse posterior lip (Fig. 136).

*Paratype*. COLOMBIA *Dpto. Magdalena*: Sierra Nevada de Santa Marta, Río Donachui trail, 2,400–2,800 m, 2 Jan. 1973, ♀ (J. Kochalka, MCZ).

***Chrysometa sondo* new species**  
**Figures 138–142; Map 2**

*Holotype*. Female holotype with five female paratypes from path from Pilimbalá to Volcán Puracé, 3,690 m, Parque Nacional Puracé, *Dpto. Cauca*, Colombia, 12–13 Jan. 1983 (J. Kochalka, MCZ). The specific name is an arbitrary combination of letters.

*Description*. Female. Carapace orange with black marks; sternum black; legs orange with black rings. Dorsum of abdomen with silver spots and black marks (Fig. 142); sides with silver spots and black streaks; venter black, light line containing silver spots on each side. Secondary eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen sub-spherical with small shoulder humps (Fig. 142). Total length, 4.5 mm. Carapace, 1.5 mm long, 1.3 mm wide. First femur, 2.2 mm; patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 1.6 mm; third, 0.9 mm; fourth, 1.4 mm.

*Diagnosis*. This species is distinguished from *C. marta* and *C. sevellano* by an indistinct depression on the anterior end of each side of the median septum of the epigynum (Fig. 140).

***Chrysometa nigroventris* (Keyserling),**  
**new combination**  
**Figures 143–146**

*Meta nigroventris* Keyserling, 1880: 316, pl. 4, fig. 17, ♂. Three male syntypes from New Granada [Spanish colony of Colombia and Panama] (BMNH), examined, and labeled syntypes.

*Argyropeira nigroventris*:—Keyserling, 1893: 350, pl. 18, fig. 258.

*Leucauge nigroventris*:—Roewer, 1942: 1011. Bonnet, 1957: 2472.

*Note*. Keyserling described a female but pictured a male palp. Female is a misprint since the original specimens of Keyserling were males. A small pencil label in the type vial reads “not types,” apparently written by Pocock who saw Keyserling’s description of a female and who also inserted a BMNH India ink label: *Meta nigroventris* when curating the collections.

*Description*. Male syntype. Carapace, legs light orange. Labium, sternum black (Fig. 144). Dorsum of abdomen with a band of silver spots on each side, black transverse patches posteriorly, and some silver spots anteriorly, but with distinct median longitudinal gray line; venter black with two wide silver parallel lines (Figs. 143, 144). Eyes subequal in size. Anterior median eyes 0.8 diameters apart, 0.8 from laterals. Posterior median eyes 0.9 diameters apart, 1.1 from laterals. Abdomen oval. Total length 2.5 mm. Carapace 1.3 mm long, 0.9 mm wide. First femur 1.9 mm long; patella and tibia, 2.3 mm; metatarsus, 1.8 mm; tarsus, 0.5 mm. Second patella and tibia, 1.4 mm; third, 0.5 mm; fourth, 1.0 mm.

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Figures 124–126. *Chrysometa keyserlingi* n. sp. 124. Female abdomen, dorsal. 125, 126. Left male palpus. 125. Ventral. 126. Lateral.

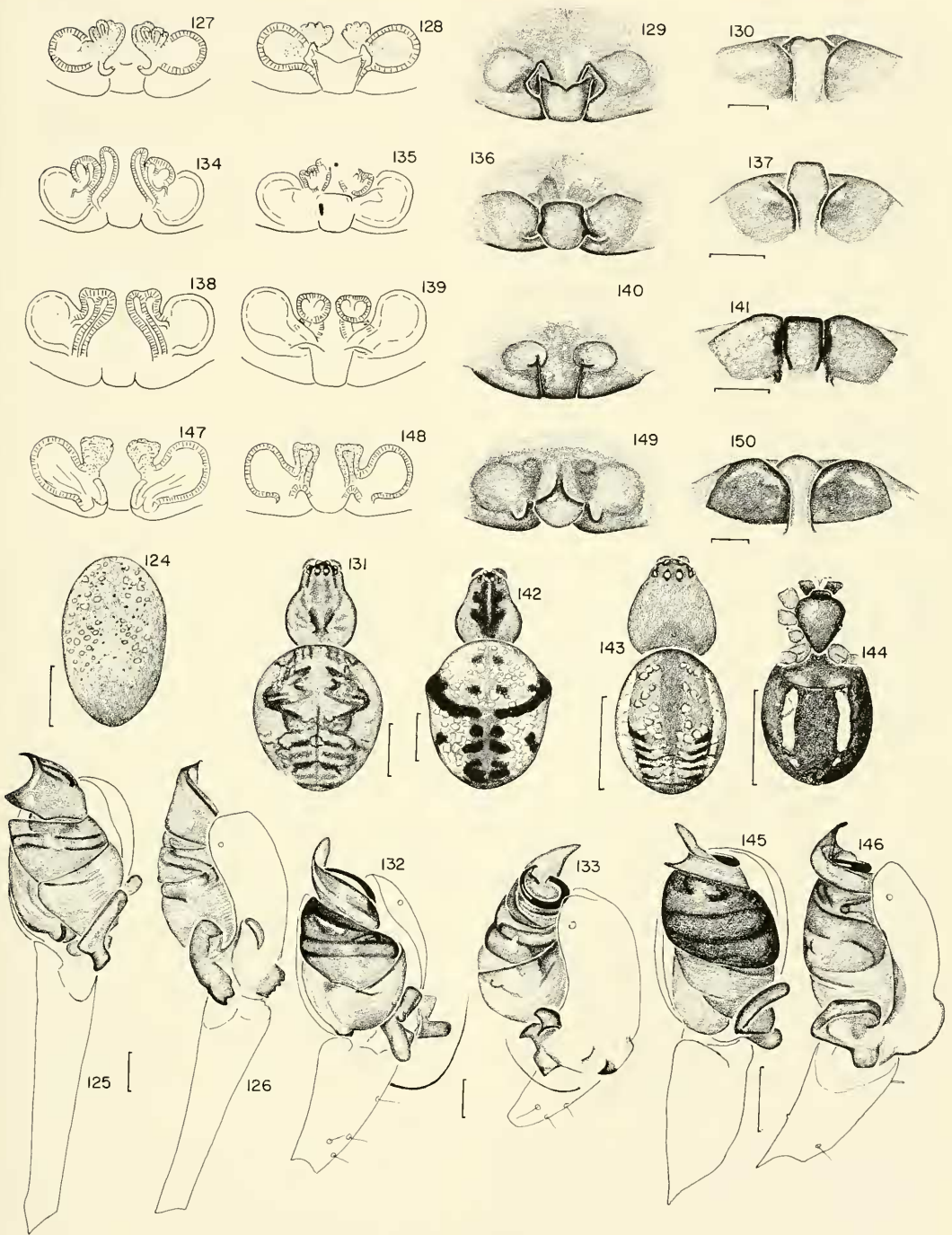
Figures 127–133. *C. donachui* n. sp. 127–130. Epigynum. 127. Dorsal, cleared. 128. Ventral, cleared. 129. Ventral. 130. Posterior. 131. Female. 132, 133. Male palpus. 132. Ventral. 133. Lateral.

Figures 134–137. *C. marta* n. sp., epigynum. 134. Dorsal, cleared. 135. Ventral, cleared. 136. Ventral. 137. Posterior.

Figures 138–142. *C. sondo* n. sp. 138–141. Epigynum. 138. Dorsal, cleared. 139. Ventral, cleared. 140. Ventral. 141. Posterior. 142. Female.

Figures 143–146. *C. nigroventris* (Keyserling). 143, 144. Male. 143. Dorsal. 144. Ventral. 145, 146. Male palpus. 145. Ventral. 146. Lateral.





Figures 147-150. *C. sevellano* n. sp., epigynum. 147. Dorsal, cleared. 148. Ventral, cleared. 149. Ventral. 150. Posterior.  
 Scale lines. 0.1 mm, except Figures 124, 131, 142-144, 1.0 mm.

**Diagnosis.** The palpus has a much shorter tibia (Figs. 145, 146) than *C. keyserlingi* and in lateral view a fan-shaped paracymbium with a small knob below (Fig. 146).

***Chrysometa sevellano* new species**

Figures 147–150; Map 2

**Holotype.** Female holotype and one female paratype from N. Río Sevellano, 3,700 m, Sierra Nevada de Santa Marta, Colombia, 11 Feb. 1974 (J. A. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace yellow with black V-shaped mark; sternum black; legs yellow with indistinct black rings. Dorsum of abdomen without silver spots, markings like *C. donachui*. Secondary eyes equal to 1.2 diameters of anterior medians. Anterior median eyes slightly more than their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, 1.3 diameters from laterals. Abdomen oval. Total length, 5.0 mm. Carapace, 2.1 mm long, 1.9 mm wide. First femur, 3.4 mm; patella and tibia, 4.2 mm; metatarsus, 3.3 mm; tarsus, 1.3 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.3 mm.

**Diagnosis.** This species is slightly larger than the similar *C. donachui*; the abdomen is more oval, and the median knob of the epigynum has an anterior stalk (Fig. 149).

**Records.** COLOMBIA *Dpto. Magdalena*, Sierra Nevada de Santa Marta: Loma Cebolleta, 3,500 m, 9 May 1975, 6♀ (J.A. Kochalka, AMNH, BMNH, IBNA, MCZ, USNM).

***Chrysometa chulumani* new species**

Figures 151–154; Map 2

**Holotype.** Female from Chulumani, 1,700 m, Yungas, *Dpto. La Paz*, Bolivia, 17–25 Dec. 1955 (L. Peña, IRSNB). The specific name is a noun in apposition after the locality.

**Description.** Female. Carapace, sternum, legs light orange. Abdomen evenly covered with small silver spots about their

diameter apart. Eyes subequal in size. Anterior median eyes their diameter apart, slightly more than their diameter from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Abdomen subspherical. Total length, 4.4 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 2.8 mm; patella and tibia, 3.4 mm; metatarsus, 2.9 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

**Diagnosis.** This species differs from *C. serachui* and *C. adelis* and others by the epigynum having a septum and a square posterior transverse bar with the depressions on each side of the septum and with the septum and bar occupying an area longer than wide (Fig. 153).

***Chrysometa adelis* new species**

Figures 155–159; Map 2

**Holotype.** Female from above Fidelia, ca. 2,000 m, Dept. Valle, Colombia, 28 February 1969 (W. Eberhard, MCZ). The name is an arbitrary combination of letters.

**Description.** Female. Carapace orange, head and thorax darker; sternum orange with some gray; legs orange, indistinctly ringed. Dorsum of abdomen with black marks and tiny silver spots on sides; sides silver, black towards venter; venter black with two thin silver longitudinal lines (Fig. 159). Eyes subequal in size. Anterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen narrow oval (Fig. 159). Total length, 5.8 mm. Carapace, 2.5 mm long, 1.9 mm wide. First femur, 5.2 mm; patella and tibia, 6.3 mm; metatarsus, 6.2 mm; tarsus, 1.7 mm. Second patella and tibia, 3.8 mm; third, 1.9 mm; fourth, 2.9 mm.

**Diagnosis.** The species differs from *C. schneblei* by having the diagonal slits on each side of the median septum of the epigynum shorter and the depressions not bordered (Fig. 157).

**Paratypes.** Two ♀ from type locality, 2 Dec. 1969 (W. Eberhard, MCZ).

***Chrysometa schneblei* new species**  
**Figures 160–164; Map 2**

**Holotype.** Female from Medellín, 1,700 m, Dept. Antioquia, Colombia, Jan. 1964 (P. B. Schneble, MCZ). The species is named after the collector, Father Schneble.

**Description.** Female. Carapace orange-yellow with gray markings (Fig. 164); sternum with gray pigment on orange; legs orange-yellow with indistinct gray rings. Dorsum of abdomen with gray marks on white pigment spots (Fig. 164); venter black between epigynum and spinnerets, with a white line on each side. Secondary eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes 1.2 diameters apart, 1.2 diameters from laterals. Posterior median eyes 0.8 diameters apart, slightly more than their diameter from laterals. Abdomen oval (Fig. 164). Total length, 4.2 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.7 mm; patella and tibia, 3.3 mm; metatarsus, 2.6 mm; tarsus, 0.9 mm. Second patella and tibia, 2.0 mm; third, 1.0 mm; fourth, 1.6 mm.

**Note.** The epigynum is filled with a plug which cannot be removed.

**Diagnosis.** This species differs from *C. adelis* by longer, diagonal slits on each side of the median septum of the epigynum and by having the depressions anteriorly surrounded by a lip (Fig. 162).

**Natural History, Distribution.** Found 1,800 to 3,000 m, central Colombia, Ecuador (Map 2).

**Paratypes.** COLOMBIA *Dpto. Cundinamarca*: Monterodondo, 3,000 m, 30 Jan. 1975, 5♀ (A. Schneble, MCZ). *Valle*: above Habana, 2,200 m, 16 Sept. 1969, ♀ (W. Eberhard, MCZ). ECUADOR *Prov. Imbabura*: Otavalo-Apuela, 2,200 m, 8–9 Sept. 1977, ♀ (L. Peña, AMNH). *Loja*: Zamora, 1,800–2,200 m, 28 Oct. 1977, ♀ (L. Peña, AMNH).

***Chrysometa serachui* new species**  
**Figures 165–169; Map 2**

**Holotype.** Female from Serachui, 1,600 m, Sierra Nevada de Santa Marta, Colombia, 27 Dec. 1973

(J. A. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace yellow with indistinct gray V-shaped mark; sternum gray on orange; legs yellow, indistinctly ringed. Dorsum of abdomen with indistinct gray marks and white spots; venter gray with colorless band on each side, bands widest posteriorly (Fig. 169). Eyes subequal in size. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 1.6 mm long, 1.4 mm wide. First femur, 2.9 mm; patella and tibia, 3.4 mm; metatarsus, 2.9 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.6 mm.

**Diagnosis.** This species differs from *C. sevellano* and *C. sondo* by having the openings of the epigynum midway along the side of the median septum (Fig. 167).

**Paratypes.** COLOMBIA *Dpto. Magdalena*, Sierra Nevada de Santa Marta: Serra Nueva Granada, 2,000 m, 7 April 1975, ♀, 2 imm. (J. A. Kochalka, MCZ). W of Cerro Bucuncusa, 1,800 m, 29 Dec. 1973, ♀ (J. A. Kochalka, AMNH).

***Chrysometa banos* new species**  
**Figures 170–174; Map 2**

**Holotype.** Female from Baños, 2,200 m el., Prov. Tungurahua, Ecuador, April 1939 (W. C. Macintyre, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange-yellow; sternum, legs dark brown. Dorsum of abdomen with scattered white spots more than their diameter apart (Fig. 174); venter with longitudinal black band between epigynum and spinnerets. Eyes subequal in size. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen oval (Fig. 174). Total length, 5.2 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 2.9 mm; patella and



tibia, 3.8 mm; metatarsus, 3.1 mm; tarsus, 1.1 mm. Second patella and tibia, 2.4 mm; third, 1.2 mm; fourth, 1.8 mm.

*Diagnosis.* This species differs from *C. satulla* by having the openings of the epigynum at the ends of diagonal grooves (Fig. 172); *C. banos* is smaller than *C. adelis* and has a wider abdomen than *C. schneblei*.

*Chrysometa satulla* (Keyserling),  
new combination

Figures 175–179; Map 2

*Meta satulla* Keyserling, 1880: 556, pl. 16, fig. 7, ♀.

Female holotype in shriveled condition from Palataypampa [1,800 m, Dpto. Junín, Prov. Tarma], Peru (PAN), examined. Roewer, 1942, Katalog der Araneae, 1: 920. Bonnet, 1957: 2797.

*Argyropeira satulla*:—Keyserling, 1893: 339, pl. 17, fig. 250, ♀.

*Note.* Female holotype is dark and shriveled. It may once have been dried.

*Description.* Female. Carapace dark orange. Sternum darker than coxae. Legs orange. Dorsum of abdomen silver with black on each anterior dorsal side, silver in between, median posterior longitudinal dark band containing paired black patches (Fig. 179); venter with silver patch on each side, closer to spinnerets than epigynum, and a median dark longitudinal band and silver specks here and there on sides. Eyes subequal in size. Anterior median eyes their diameter apart, 1.2 mm from laterals. Posterior median eyes slightly less than their diameter apart, their diameter from laterals. Abdomen probably oval [shriv-

eled now], shield-shaped, almost as wide as long, with anterior humps. Total length, 3.3 mm. Carapace, 1.3 mm long, 1.0 mm wide. First femur, 2.2 mm; patella and tibia, 2.6 mm; metatarsus, 2.3 mm; tarsus, 0.8 mm. Second patella and tibia, 1.5 mm; third, 0.9 mm; fourth, 1.2 mm.

*Diagnosis.* This species is distinguished from *C. banos* by having a wider septum and transverse bar in the epigynum and by having the openings in circular depressions (Fig. 177).

*Chrysometa lepida* (Keyserling),  
new combination

Figures 180–184; Map 2

*Meta lepida* Keyserling, 1882: 273, pl. 11, fig. 3, ♀.

♂. Male and two female syntypes from Pumamarca, 1,900 m el., Prov. Tarma, Dpto. Junín, Peru (PAN), examined. Roewer, 1942: 919.

*Argyropeira lepida*:—Keyserling, 1893: 327, pl. 17, fig. 242, ♀, ♂.

*Leucauge lepida*:—Bonnet, 1957: 2470.

*Note.* The type specimens are in poor physical condition. The internal female genitalia were illustrated in dorsal view only by clearing with clove oil.

*Description.* Female. Carapace, sternum, legs orange-yellow. Dorsum of abdomen with silver spots; black spot on each side anterior lateral; venter and posterior above spinnerets without spots. Anterior median eyes slightly smaller than others. Anterior median eyes their diameter apart, 2.5 from laterals. Posterior median eyes their diameter apart, 1.5 from laterals. Total length, 2.9 mm. Carapace, 1.3 mm

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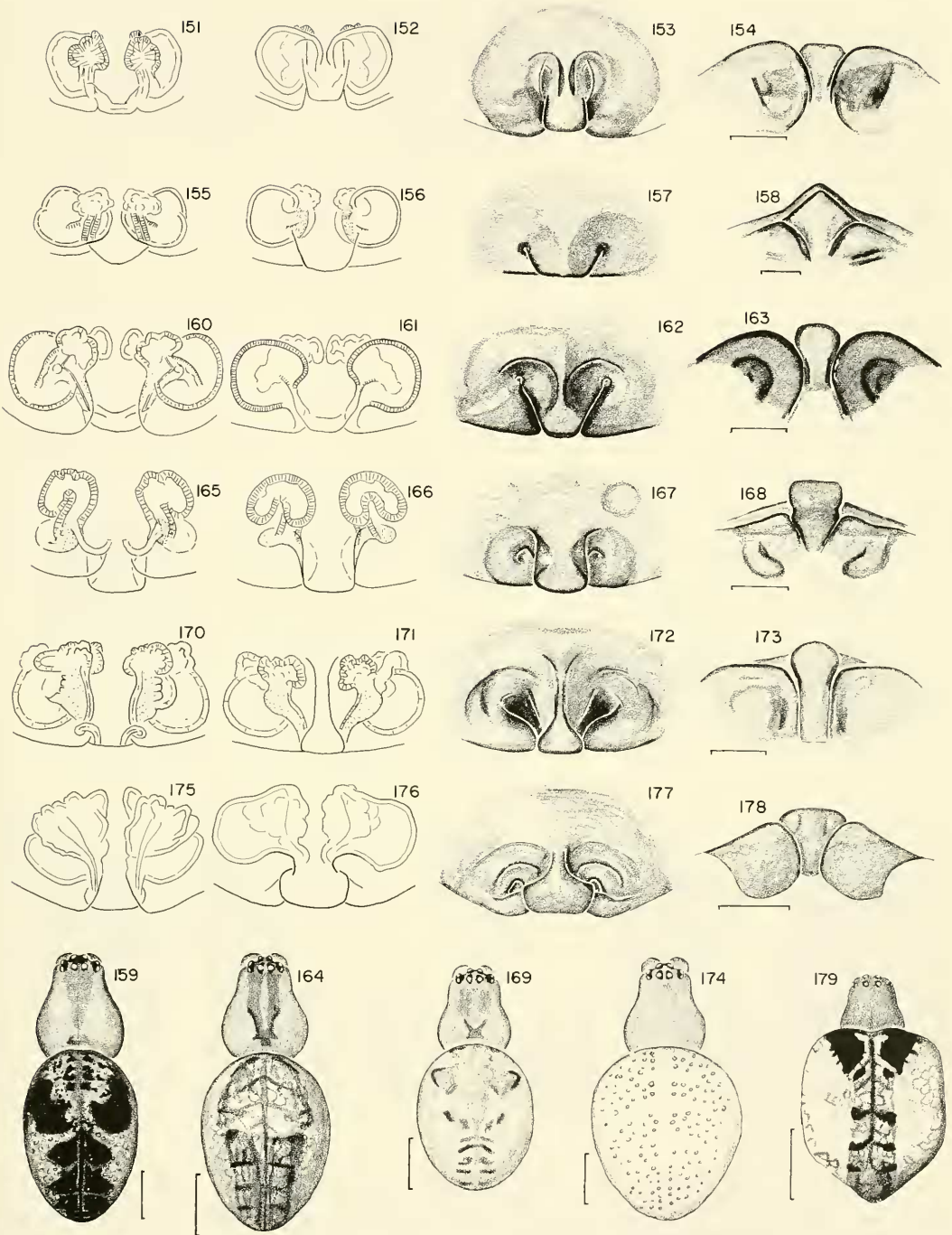
Figures 151–154. *Chrysometa chulumani* n. sp., epigynum. 151. Dorsal, cleared. 152. Ventral, cleared. 153. Ventral. 154. Posterior.

Figures 155–159. *C. adelis* n. sp. 155–158. Epigynum. 155. Dorsal, cleared. 156. Ventral, cleared. 157. Ventral. 158. Posterior. 159. Female.

Figures 160–164. *C. schneblei* n. sp. 160–163. Epigynum. 160. Dorsal, cleared. 161. Ventral, cleared. 162. Ventral. 163. Posterior. 164. Female.

Figures 165–169. *C. serachui* n. sp. 165–168. Epigynum. 165. Dorsal, cleared. 166. Ventral, cleared. 167. Ventral. 168. Posterior. 169. Female.

Figures 170–174. *C. banos* n. sp. 170–173. Epigynum. 170. Dorsal, cleared. 171. Ventral, cleared. 172. Ventral. 173. Posterior. 174. Female.



Figures 175-179. *C. satulla* (Keyserling). 175-178. Epigynum. 175. Dorsal, cleared. 176. Ventral, cleared. 177. Ventral. 178. Posterior. 179. Female.

Scale lines. 0.1 mm, except Figures 159, 164, 169, 174, 179, 1.0 mm.

long, 1.2 mm wide. First femur, 1.7 mm; patella and tibia, 1.9 mm; metatarsus, 1.6 mm; tarsus, 0.7 mm. Second patella and tibia, 1.5 mm; third, 0.8 mm; fourth, 1.0 mm.

Male. Coloration like female. Total length, 2.0 mm. Carapace, 1.2 mm long, 0.9 mm wide. First femur, 1.8 mm; patella and tibia, 2.0 mm; metatarsus, 1.7 mm; tarsus, 0.7 mm. Second patella and tibia, 1.6 mm; third, 0.7 mm; fourth, 1.0 mm.

*Diagnosis.* The epigynum differs from that of related species by lacking a depression in ventral view and having three posterior lobes (Figs. 181, 182). The male differs from others by the tight coil of the short palpal embolus, the shape of the paracymbium (Figs. 183, 184) and by the two teeth on the base of the cymbium (Fig. 184).

### *Chrysometa boquete* new species

Figures 185–191; Map 2

*Holotype.* Female holotype and three female, one male paratypes from Boquete, Chiriquí Prov., Panama, Aug. 1950 (A. M. Chickering, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace orange; chelicerae brown; sternum black on orange. Legs orange with black rings on distal ends of tibiae. Dorsum of abdomen with silver spots, black shoulder patches, and posterior black transverse marks (Fig. 189); sides black; venter with triangular black mark pointing to spinnerets, and a patch with silver spots on each side posteriorly; black around spinnerets. Anterior lateral eyes and posterior median eyes equal to 1.2 diameters of anterior medians; posterior laterals equal to diameter of

anterior medians. Anterior median eyes their diameter apart, their diameter from laterals. Posterior median eyes their diameter apart, 1.2 diameters from laterals. Total length, 3.5 mm. Carapace, 1.4 mm long, 1.2 mm wide. First femur, 2.1 mm; patella and tibia, 2.4 mm; metatarsus, 2.1 mm; tarsus, 0.7 mm. Second patella and tibia, 1.6 mm; third, 0.9 mm; fourth, 1.3 mm.

Male. Coloration like female but darker. Venter of abdomen with pair of silver patches anterior of spinnerets. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, slightly less than their diameter from laterals. Posterior median eyes their diameter apart, 1.2 diameters from laterals. Abdomen elongate oval. Total length, 2.4 mm. Carapace, 1.2 mm long, 1.0 mm wide. First femur, 2.5 mm; patella and tibia, 3.0 mm; metatarsus, 2.7 mm. Second patella and tibia, 1.7 mm; third, 0.8 mm; fourth, 1.3 mm.

*Variation.* Total length of females varied from 2.8 to 3.5 mm, of males from 2.4 to 2.9 mm.

*Diagnosis.* The female differs from related species by having the median septum of the epigynum wider than long with the openings posterior on each side (Fig. 187). The male differs from *C. aramba* by having a tightly wound short embolus (Figs. 190, 191) and by having the "lower" end of the paracymbium rounded and corniculate (Fig. 190).

*Natural History, Distribution.* Found from 1,500 to 3,300 m, western Panama, Colombia (Map 2).

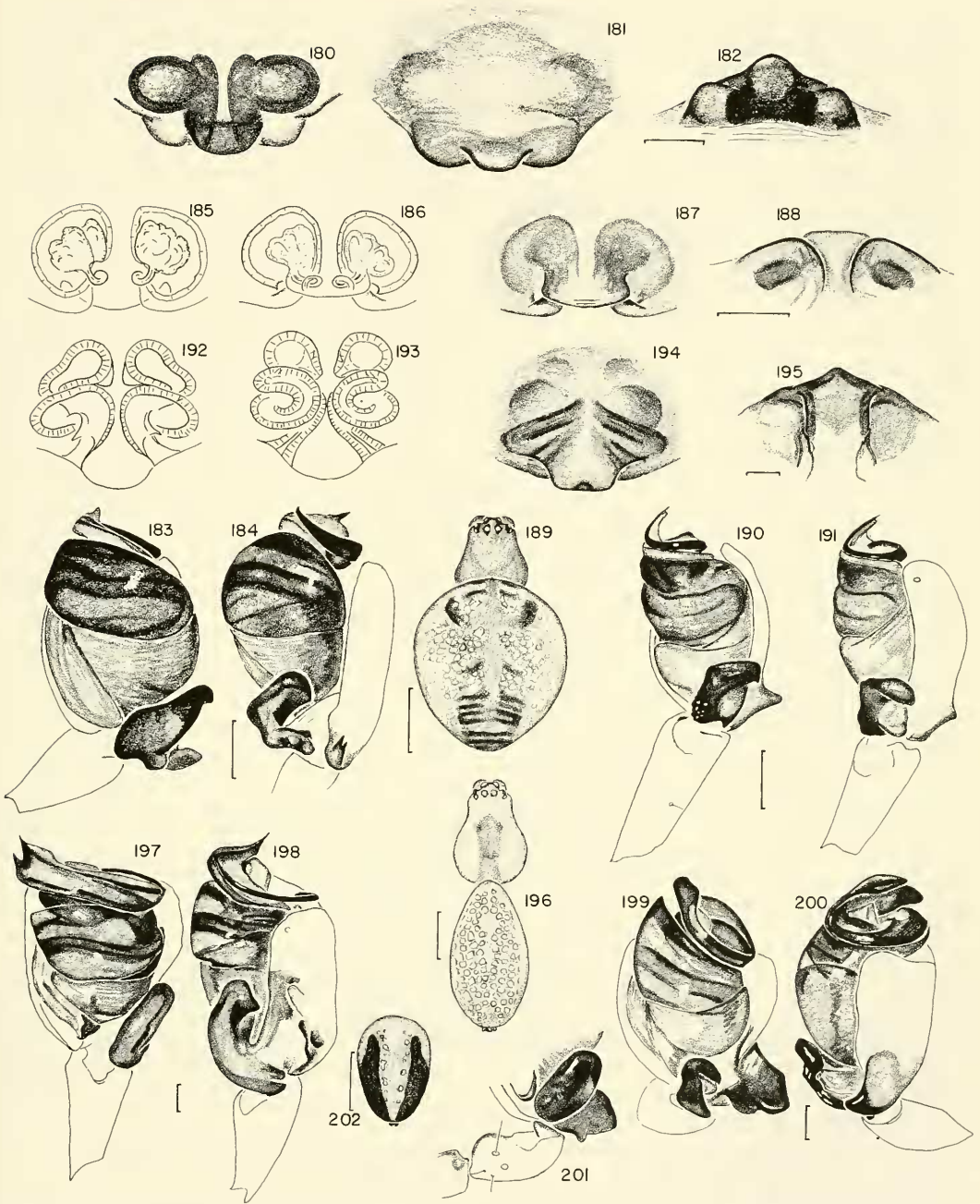
*Paratypes.* PANAMA Prov. Chiriquí: Boquete, Aug. 1950, 3♀, ♂ (A. M. Chickering, MCZ); Volcán, 26 Feb. 1936, 4♀, 2♂ (W. J. Gertsch, AMNH). COLOMBIA Bo-

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Figures 180–184. *Chrysometa lepida* (Keyserling). 180–182. Epigynum. 180. Dorsal. 181. Ventral. 182. Posterior. 183, 184. Left male palpus. 183. Ventral. 184. Lateral.

Figures 185–191. *C. boquete* n. sp. 185–188. Epigynum. 185. Dorsal, cleared. 186. Ventral, cleared. 187. Ventral. 188. Posterior. 189. Female. 190, 191. Male palpus. 190. Ventral. 191. Lateral.





Figures 192–198. *C. saladito* n. sp. 192–195. Epigynum. 192. Dorsal, cleared. 193. Ventral, cleared. 194. Ventral. 195. Posterior. 196. Female. 197, 198. Male palpus. 197. Ventral. 198. Lateral.

Figures 199–202. *C. lapazensis* n. sp. 199–201. Male palpus. 199. Ventral. 200. Lateral. 201. Paracymbium and patella, ventral. 202. Male abdomen, dorsal.

Scale lines. 0.1 mm, except Figures 189, 196, 202, 1.0 mm.

gotá, Coachi Rd., 3,300 m, 19 July 1967, ♀ (P. B. Wygodzinsky, AMNH).

***Chrysometa saladito* new species**  
**Figures 192–198; Map 2**

*Holotype.* Male holotype and female paratype from near Saladito, 1,000 m el., Dpto. Valle, Colombia (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow-white with orange patch on middle; no black pigment around eyes. Sternum yellow-white. Legs yellow-white, distal gray rings around ends of tibiae, metatarsi, and tarsi. Dorsum and sides of abdomen with large silver spots (Fig. 196); venter with silver spots, except for epigastric area and around spinnerets. Posterior median eyes equal to diameter of anterior medians; lateral eyes 0.8 diameters of anterior median eyes. Anterior median eyes their diameter apart, their diameter from laterals; posterior median eyes slightly more than their diameter apart, the same distance from laterals. Total length, 4.5 mm. Carapace, 2.0 mm long, 1.5 mm wide. First femur, 4.3 mm; patella and tibia, 4.6 mm; metatarsus, 4.6 mm; tarsus, 1.4 mm. Second patella and tibia, 3.2 mm; third, 1.7 mm; fourth, 2.4 mm.

Male. Carapace yellow with black pigment around edge and a wide brown band on sides of thorax; no orange patch. Eyes subequal in size. Anterior median eyes their diameter apart, their diameter from laterals. Posterior median eyes slightly more than their diameter apart, the same distance from laterals. Total length, 4.9 mm. Carapace, 2.4 mm long, 1.9 mm wide. First femur, 5.9 mm; patella and tibia, 7.3 mm; metatarsus, 7.9 mm; tarsus, 1.4 mm. Second patella and tibia, 4.4 mm; third, 1.7 mm; fourth, 2.9 mm.

*Note.* The male is larger than female and has a different pattern on the carapace.

*Diagnosis.* The epigynum is distinguished by a wide median, posterior lobe and diagonal dark streaks and round patches anteriorly (Fig. 194). The palpus

is distinguished by the conductor tipped by two points visible in ventral view (Fig. 197) and an indistinctly shaped paracymbium only slightly curved in lateral view (Fig. 198).

*Paratype.* COLOMBIA Dpto. Valle: Above Saladito, 1,800 m, 20 March 1970, ♀ (W. Eberhard, MCZ).

***Chrysometa lapazensis* new species**  
**Figures 199–202; Map 2**

*Holotype.* Male from Chulumani, 1,700 m, Yungas, Dpto. La Paz, Bolivia, 17–25 Dec. 1955 (L. Peña, IRSNB). The specific name is an adjective after the locality.

*Description.* Male. Carapace light orange with black patch around anterior median eyes; chelicerae, labium, legs dusky, sternum orange. Dorsum of abdomen with black patches and with two lines of silver spots (Fig. 202); venter black. Eyes subequal in size. Anterior median eyes their diameter apart, slightly less than twice their diameter from laterals. Posterior median eyes their diameter apart, slightly more than twice their diameter from laterals. Clypeus height equal to diameter of anterior median eyes. Chelicerae more elongate than in other species. Total length, 2.8 mm. Carapace, 1.5 mm long, 1.1 mm wide. First femur, 2.1 mm; patella and tibia, 2.3 mm; metatarsus, 1.9 mm; tarsus, 0.8 mm. Second patella and tibia, 1.9 mm; third, 0.8 mm; fourth, 1.1 mm.

*Diagnosis.* The palpus is distinguished from that of other males by having a relatively small, C-shaped in ventral view, paracymbium (Fig. 199) and a heavy distal hook at the proximal end of the cymbium (Fig. 200).

***Chrysometa eberhardi* new species**  
**Figures 203–208; Map 2**

*Holotype.* Female from near Saladito, 1,700 m, Dpto. Valle, Colombia, March 1976 (W. Eberhard no. 1053, MCZ). The species is named after the collector.

*Description.* Female. Carapace yellow with black marks; chelicerae orange to

black; labium, endites, sternum black; legs yellow with narrow black rings. Dorsum of abdomen with white spots and black patches (Fig. 208); venter black in center with pair of white comma-shaped marks closer to spinnerets than to epigynum. Eyes subequal in size. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes their diameter apart, 1.3 diameters from laterals. Abdomen subspherical. Total length, 4.5 mm. Carapace, 1.7 mm long, 1.2 mm wide. First femur, 2.5 mm; patella and tibia, 3.1 mm; metatarsus, 2.5 mm; tarsus, 0.9 mm. Second patella and tibia, 2.0 mm; third, 0.9 mm; fourth, 1.6 mm.

**Diagnosis.** This species differs from *C. cuenca* and *C. serachui* by having the median scape-like structure as wide as long in posterior view and separating the lateral plates (Fig. 207); the seminal receptacles are larger and subspherical, unlike those of related species (Figs. 203, 204).

**Paratype.** COLOMBIA *Dpto. Valle:* Saladito, 1,600 m, Nov. 1973, ♀ (W. Eberhard, no. 647, MCZ).

### *Chrysometa utcuyacu* new species Figures 209–214; Map 2

**Holotype.** Female from Utcuyacu, 1,600–2,200 m, *Dpto. Junin*, Peru, March 1948, male paratype, Feb. 1948 (F. Woytkowski, AMNH). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange with dusky V-shaped mark on thorax; chelicerae, labium, sternum dusky orange; legs orange with dark rings. Dorsum of abdomen with silver spots and dark C-shaped mark on left shoulder, mirror image on right, and posteriorly with dark band consisting of transverse bars; venter with black mark constricted posteriorly by two light patches of silver spots. Anterior lateral eyes equal to 1.5 diameters of anterior medians; posterior eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Posterior median eyes 0.8 diameters apart, 1.3 diameters from laterals. Abdo-

men oval. Total length, 6.7 mm. Carapace, 2.5 mm long, 1.9 mm wide. First femur, 4.0 mm; patella and tibia, 4.9 mm; metatarsus, 4.2 mm; tarsus, 1.2 mm. Second patella and tibia, 3.1 mm; third, 1.5 mm; fourth, 2.4 mm.

**Male.** Coloration similar to that of female, but with median dusky patch on thorax. Dorsum of abdomen with scattered silver spots (not continuous as in female). Eyes subequal in size. Anterior median eyes 0.8 diameters apart, slightly more than their diameter from laterals. Posterior median eyes 0.6 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 3.4 mm. Carapace, 1.7 mm long, 1.5 mm wide. First femur, 4.2 mm; patella and tibia, 5.2 mm; metatarsus, 5.1 mm; tarsus, 1.2 mm. Second patella and tibia, 2.6 mm; third, 1.1 mm; fourth, 2.0 mm.

**Diagnosis.** The epigynum is distinguished by a knob-like septum whose margins flare laterally anterior of the depressions (Fig. 211). The conductor of the male palpus, which widens distally into a diamond-shaped tip, and the complexly shaped paracymbium separate the males from others (Figs. 213, 214).

### *Chrysometa choroni* new species Figures 215–218; Map 2

**Holotype.** Female from Choroni, Est. Aragua, Venezuela, 9 March 1959 (A. M. Nadler, AMNH). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace light orange with dusky margins and dusky band from each posterior median eye touching in thoracic depression; sternum black; legs light orange with narrow dusky rings. Dorsum of abdomen with silver spots, mostly fused, absent above heart; black marks on each shoulder converging posteriorly and continuing into band of black transverse marks; sides silver; venter black with silver bands on each side approaching each other posteriorly. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes their diame-



ter apart, slightly more than their diameter from laterals. Clypeus height 0.5 diameters of anterior median eyes. Abdomen short, oval. Total length, 4.2 mm. Carapace, 1.5 mm long, 1.3 mm wide. First femur, 2.9 mm; patella and tibia, 3.1 mm; metatarsus, 2.9 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 1.0 mm; fourth, 1.5 mm.

**Diagnosis.** The median and lateral lobes seen in ventral view of the epigynum (Fig. 217), and the distinct median swelling in posterior view (Fig. 218), distinguish this species from others.

*Chrysometa cali* new species  
Figures 219–222; Map 2

**Holotype.** Female from 21 km W of Cali, Dpto. Valle, Colombia, 20 March 1955 (E. I. Schlinger, E. S. Ross, CAS). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange, head lightest; sternum, legs yellow. Abdomen with very large silver patches, no black. Eyes small, subequal in size. Anterior median eyes 1.5 diameters apart, 1.3 diameters from laterals. Posterior median eyes twice their diameter apart, 1.5 from laterals. Abdomen elongate oval (but destroyed). Total length, ca. 5 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 4.0 mm; patella and tibia, 4.5 mm; metatarsus, 4.5 mm; tarsus, 1.3 mm. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth, 2.4 mm.

**Diagnosis.** The epigynum of this species is distinguished by having the septum and openings only visible in posterior view (Fig. 222); in ventral view there is a pair of oval shadows (Fig. 221).

*Chrysometa carmelo* new species  
Figures 223–230; Map 2

**Holotype.** Female from Quebrada La Sierrita, Serra Nueva Granada, 1,260 m, Sierra Nevada de Santa Marta, Colombia, 20 Feb. 1974 (J. A. Kochalka, MCZ). The specific name is a noun in apposition after a collecting locality.

**Description.** Female. Carapace orange; sternum black; legs orange gray. Dorsum of abdomen colorless, black posteriorly (Fig. 227); sides black, with two lighter patches posteriorly; venter black, no longitudinal lines. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, 2 diameters from laterals. Posterior median eyes their diameter apart, 2.5 diameters from laterals. Abdomen subspherical. Total length 3.5 mm. Carapace, 1.5 mm long, 1.1 mm wide. First femur, 1.8 mm; patella and tibia, 2.0 mm; metatarsus, 1.5 mm; tarsus, 0.7 mm. Second patella and tibia, 1.6 mm; third, 0.8 mm; fourth, 1.1 mm.

**Male.** Coloration like female. Eyes subequal in size. Anterior median eyes their diameter apart, 2 diameters from laterals. Posterior median eyes their diameter apart, 2.5 diameter from laterals. Clypeus height equal to four diameters of anterior median eyes. Chelicerae with a carina on side. Total length 3.0 mm. Carapace, 1.4 mm long, 1.2 mm wide. First femur, 2.0 mm; patella and tibia, 2.1 mm; metatarsus, 1.7 mm; tarsus, 0.7 mm. Second patella and tibia, 1.7 mm; third, 0.7 mm; fourth, 1.0 mm.

**Diagnosis.** The epigynum of *C. carmelo* is distinguished by a triangular posterior projection containing a pair of openings (Fig. 225); the septum is narrower than that of *C. opulenta* and there are

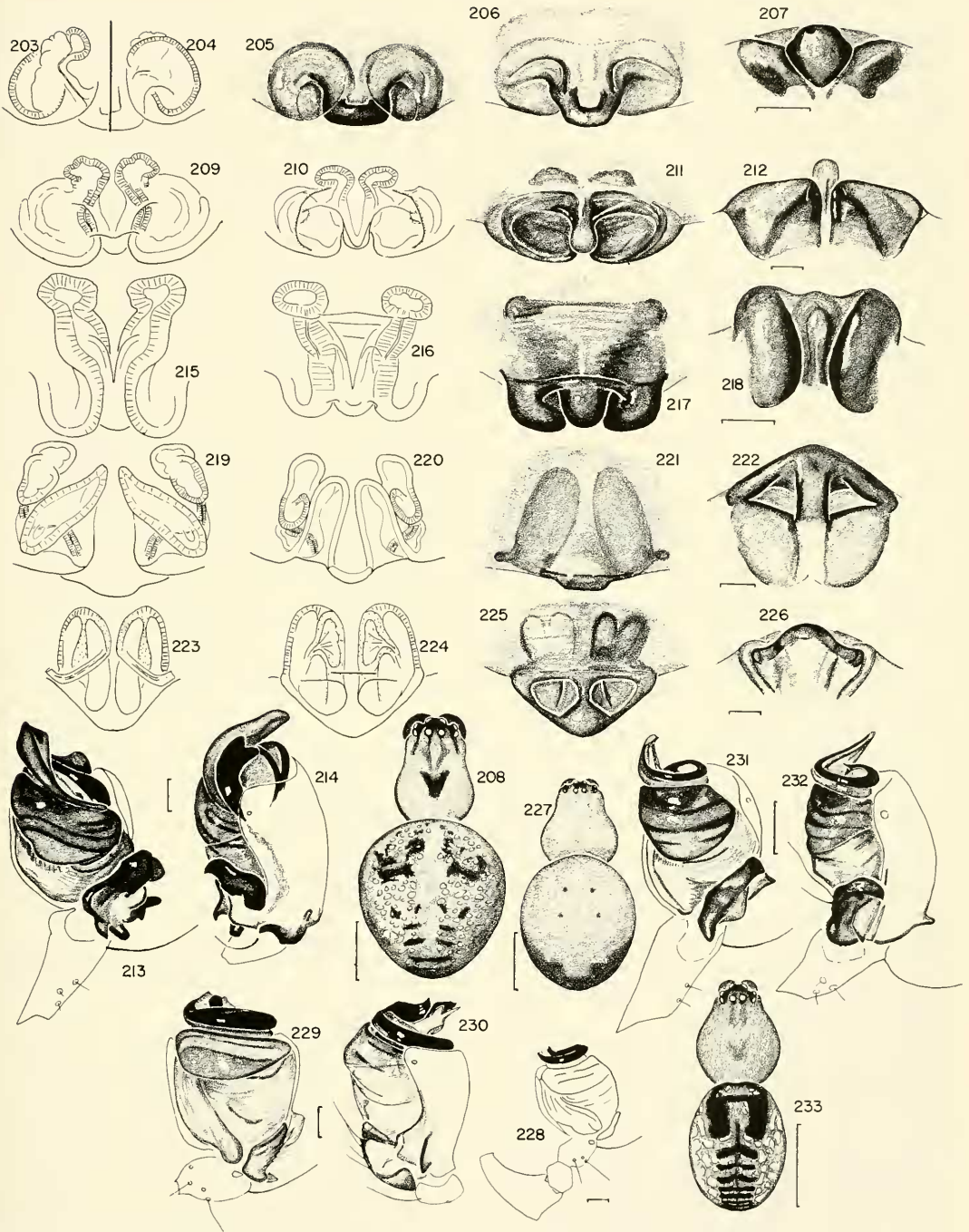
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Figures 203–208. *Chrysometa eberhardi* n. sp. 203–207. Epigynum. 203. Dorsal, cleared. 204. Ventral, cleared. 205, 206. Ventral. 207. Posterior. 208. Female.

Figures 209–214. *C. utucuyacu* n. sp. 209–212. Epigynum. 209. Dorsal, cleared. 210. Ventral, cleared. 211. Ventral. 212. Posterior. 213, 214. Left male palpus. 213. Ventral. 214. Lateral.

Figures 215–218. *C. choroni* n. sp., epigynum. 215. Dorsal, cleared. 216. Ventral, cleared. 217. Ventral. 218. Posterior.

Figures 219–222. *C. cali* n. sp., epigynum. 219. Dorsal, cleared. 220. Ventral, cleared. 221. Ventral. 22. Posterior.



Figures 223-230. *C. carmelo* n. sp. 224-226. Epigynum. 224. Dorsal, cleared. 225. Ventral. 226. Posterior. 227. Female. 228-230. Male palpus. 228, 229. Ventral. 230. Lateral.

Figures 231-233. *C. aramba* n. sp. 231, 232. Male palpus. 231. Ventral. 232. Lateral. 233. Male.

Scale lines. 0.1 mm, except 208, 227, 233, 1.0 mm.

two pairs of anterior oval dark shadows (Fig. 225). The paracymbium of the male palpus is relatively small and its "lower" tip appears folded back on itself (Figs. 229, 230).

*Paratype.* COLOMBIA *Dpto. Magdalena*: Sierra Nevada de Santa Marta: San Pedro, Carmelo, 1,250 m, 7 Feb. 1974, ♂ (J. A. Kochalka, MCZ).

*Chrysometa aramba* new species  
Figures 231–233; Map 2

*Holotype.* Male from Carambá do Sul, Est. Rio Grande do Sul, Brazil, 9 Jan. 1976 (A. Lise, MCN). The species name is an arbitrary combination of letters.

*Description.* Male. Carapace dusky yellow, chelicerae brown; sternum dusky brown; legs dusky yellow, ends of distal articles darker. Dorsum of abdomen with black patch on each shoulder, sides with large silver spots posteriorly with transverse black bars (Fig. 233); venter black with two parallel light streaks containing silver spots. Eyes subequal in size. Anterior median eyes 0.7 diameters apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen oval. Total length, 2.7 mm. Carapace, 1.2 mm long, 1.0 mm wide. First femur, 2.2 mm; patella and tibia, 2.6 mm; metatarsus, 2.4 mm; tarsus, 0.7 mm. Second patella and tibia, 1.5 mm; third, 0.7 mm; fourth, 1.1 mm.

*Diagnosis.* This species differs from *C. boquete* by having the embolus coil of the palpus wider and the "lower" prong of the paracymbium pointed in ventral view (Figs. 231, 232).

*Chrysometa yunque* new species  
Figures 234–240; Map 2

*Holotype.* Female holotype with one male, three female paratypes from El Yunque, Puerto Rico, 26 July 1931 (A. S. Mills, AMNH). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, sternum, legs dark orange. Dorsum of abdomen with a longitudinal dusky band on

silver wider anterior than posterior sides straight and enclosing some silver at anterior end (Fig. 238); venter with gray pigment and silver comma-shaped marks on each side. Eyes subequal in size. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen subspherical (Fig. 238). Total length, 3.4 mm. Carapace, 1.3 mm long, 1.0 mm wide. First femur, 1.4 mm; patella and tibia, 1.6 mm; metatarsus, 1.1 mm; tarsus, 0.5 mm. Second patella and tibia, 1.2 mm; third, 0.7 mm; fourth, 0.9 mm.

Male. Coloration like female, except for scattered silver spots on abdomen. Eye sizes and placement like those of female. Abdomen subspherical. Total length, 2.3 mm. Carapace, 1.2 mm long, 0.9 mm wide. First femur, 1.5 mm; patella and tibia, 1.8 mm; metatarsus, 1.3 mm; tarsus, 0.6 mm. Second patella and tibia, 1.3 mm; third, 0.6 mm; fourth, 0.9 mm.

*Diagnosis.* The subtriangular median knob of the epigynum with an opening on each side (Fig. 236) distinguishes the female from other species. The short conductor, wide embolus and C-shaped in ventral view, dorsally pointing paracymbium (Figs. 239, 240) of the palpus separate the male.

*Chrysometa yotoco* new species  
Figures 241–246; Map 3

*Holotype.* Female from near Yotoco, 1,600 m el., Dpto. Valle, Colombia, Dec. 1976 (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, legs orange-yellow; sternum with gray pigment on brown. Dorsum of abdomen with transverse black marks and silver spots (Fig. 246); venter black between epigynum and spinnerets, on each side a longitudinal line of silver spots. Anterior lateral eyes, posterior median eyes equal to 1.3 diameters of anterior medians; posterior laterals equal to 1.1 diameters of an-



terior medians. Anterior median eyes 0.8 diameters apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 1.5 from laterals. Clypeus height equal to 0.4 diameters of anterior median eyes. Abdomen oval. Total length, 3.0 mm. Carapace, 1.4 mm long, 1.1 mm wide. First femur, 2.6 mm; patella and tibia, 2.8 mm; metatarsus, 2.7 mm; tarsus, 0.7 mm. Second patella and tibia, 1.6 mm; third, 0.9 mm; fourth, 1.4 mm.

*Variation.* Total length of females is 3.0 to 4.2 mm.

*Diagnosis.* The epigynum of this species differs from that of *C. boquete* by having the median septum wider than long, the lateral margins of which disappear under a transverse to round lip, which surrounds the depressions (Figs. 243, 244). In slightly posterior view round openings are visible in the depressions (Fig. 244).

*Natural History, Distribution.* Found 1,000 to 1,600 m, Venezuela, Colombia (Map 3).

*Paratypes.* VENEZUELA *Est. Aragua:* Rancho Grande, 17 Dec. 1954, ♀ (A. M. Nadler, AMNH). COLOMBIA *Dpto. Magdalena,* Sierra Nevada de Santa Marta: between Cerro Chivolo and Cerro Chumchuruba, 1,100 m, 8 March 1974, ♀ (J. Kochalka, USNM); San Pedro, June 1975, 5♀ (J. Kochalka, MCZ, AMNH, IBNA); Serra Nueva Granada, 1,500 m, 28 April 1975, 2♀ (J. Kochalka, BMNH); Valle Leumor, 1,300 m, 12 Apr. 1975, 2♀ (J. Kochalka, IBNA). *Cundinamarca:* 8 km E of El Colegio, 8 March 1955, ♀ (E. I. Schlinger, E. S. Ross, CAS).

### *Chrysometa obscura* (Bryant), new combination

Figures 247–251; Map 2

*Pseudometa obscura* Bryant, 1945: 394, fig. 30, ♀. Female holotype from Pico Diego de Ocampo, North Range, 3,000–4,000 ft. [1,000–1,200 m], Dominican Republic (MCZ), examined.

*Capichameta obscura:*—Brignoli, 1983: 227.

*Description.* Female. Carapace orange-yellow, head darkest. Sternum, legs or-

ange-yellow. Dorsum of abdomen with paired gray patches (Fig. 251). Anterior lateral eyes slightly larger than others, which are subequal in size. Anterior median eyes their diameter apart, one diameter from laterals; posterior median eyes their diameter apart, 1.5 from laterals. Abdomen subspherical. Total length, 4.0 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 2.1 mm; patella and tibia, 2.6 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 2.0 mm; third, 1.0 mm; fourth, 1.7 mm.

*Diagnosis.* This species differs from *C. maculata* by having the openings in transverse slits close to the posterior margin of the epigynum, and from *C. yotoco* by having a narrower septum (Fig. 249).

### *Chrysometa conspersa* (Bryant), new combination

Figures 252–256; Map 2

*Pseudometa conspersa* Bryant, 1945: 391, fig. 29, ♀.

Female holotype from La Visité, Haiti, 6,000–7,000 ft. [2,000–2,300 m] (MCZ), examined.

*Capichameta conspersa:*—Brignoli, 1983: 227.

*Description.* Female. Carapace orange-yellow, head darker in middle. Sternum yellow, gray on sides. Legs yellow with narrow dark rings, more distinct on underside. Dorsum of abdomen with black and white spots, posteriorly with transverse bars (Fig. 256). Sides dark, maculated. Venter with square black patch between epigynum and spinnerets. Anterior lateral eyes 1.2 diameters of anterior medians; posterior median eyes 1.2 diameters; posterior lateral eyes 0.9 diameters. Anterior median eyes their diameter apart, their diameter from laterals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 2.2 mm long, 1.7 mm wide. First femur, 4.2 mm; patella and tibia, 3.2 mm; metatarsus, 3.0 mm; tarsus, 1.3 mm. Second patella and tibia, 2.9 mm; third, 1.4 mm; fourth, 2.2 mm.

*Diagnosis.* This species is distinguished

by having the septum and transverse bar framed by a semicircular lip (Fig. 254).

***Chrysometa magdalena* new species**  
**Figures 257–261; Map 2**

*Holotype.* Female holotype and male paratype from Serra Nueva Granada, 1,900 m, Sierra Nevada de Santa Marta, Dpto. Magdalena, Colombia, 7 April 1975 (J. A. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, coxae yellowish white; sternum greenish gray, legs gray. Dorsum of abdomen purplish white with silver spots, black posteriorly on sides (Fig. 261); sides ventrally dark gray; venter gray with median black patch, no longitudinal lines. Carapace high and rounded. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, three diameters from laterals. Posterior median eyes slightly more than their diameter apart, 2.5 their diameter from laterals. Clypeus height equal to 1.7 diameters of anterior median eyes. Abdomen subspherical. Total length, 3.4 mm. Carapace, 1.3 mm long, 1.1 mm wide. First femur, 1.9 mm; patella and tibia, 2.3 mm; metatarsus, 1.9 mm; tarsus, 0.9 mm. Second patella and tibia, 1.8 mm; third, 0.9 mm; fourth 1.2 mm.

*Diagnosis.* The posteriorly extending lobe of the epigynum with the openings in a groove on each side (Fig. 259) separates this species from other *Chrysometa*.

***Chrysometa huila* new species**  
**Figures 262–268; Map 3**

*Holotype.* Male from Finca Meremberg, 10 km E Santa Leticia, 2,300 m el., Dpto. Huila, Colombia, March 1979 (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, legs orange-yellow; sternum black. Dorsum of abdomen with silver spots, smaller ones posteriorly; black in midline (Fig. 266). Venter black with line of silver pigment spots on each side. Anterior lateral eyes, posterior median eyes 1.2 diameters of anterior median eyes; posterior laterals equal to diameter of anterior median eyes. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Abdomen elongate oval (Fig. 266). Total length, 4.5 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 2.5 mm; patella and tibia, 3.1 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 2.0 mm; third, 1.1 mm; fourth, 1.6 mm.

Male. Carapace yellow, head region orange. Sternum, legs yellow. Dorsum and sides of abdomen with large silver patches, posterior with ten fine gray transverse bars; venter gray around spinnerets, and with two longitudinal rows of silver spots. Anterior lateral, posterior median eyes equal to diameter of anterior median eyes; posterior lateral eyes 0.8 diameters of anterior medians. Anterior median eyes their diameter apart, slightly more than their diameter from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 3.5 mm. Carapace, 1.7 mm long, 1.4 mm wide. First femur, 4.0 mm; patella and tibia, 4.9 mm; metatarsus, 5.3 mm; tarsus, 1.3 mm. Second patella and tibia, 2.7 mm; third, 1.2 mm; fourth, 1.9 mm.

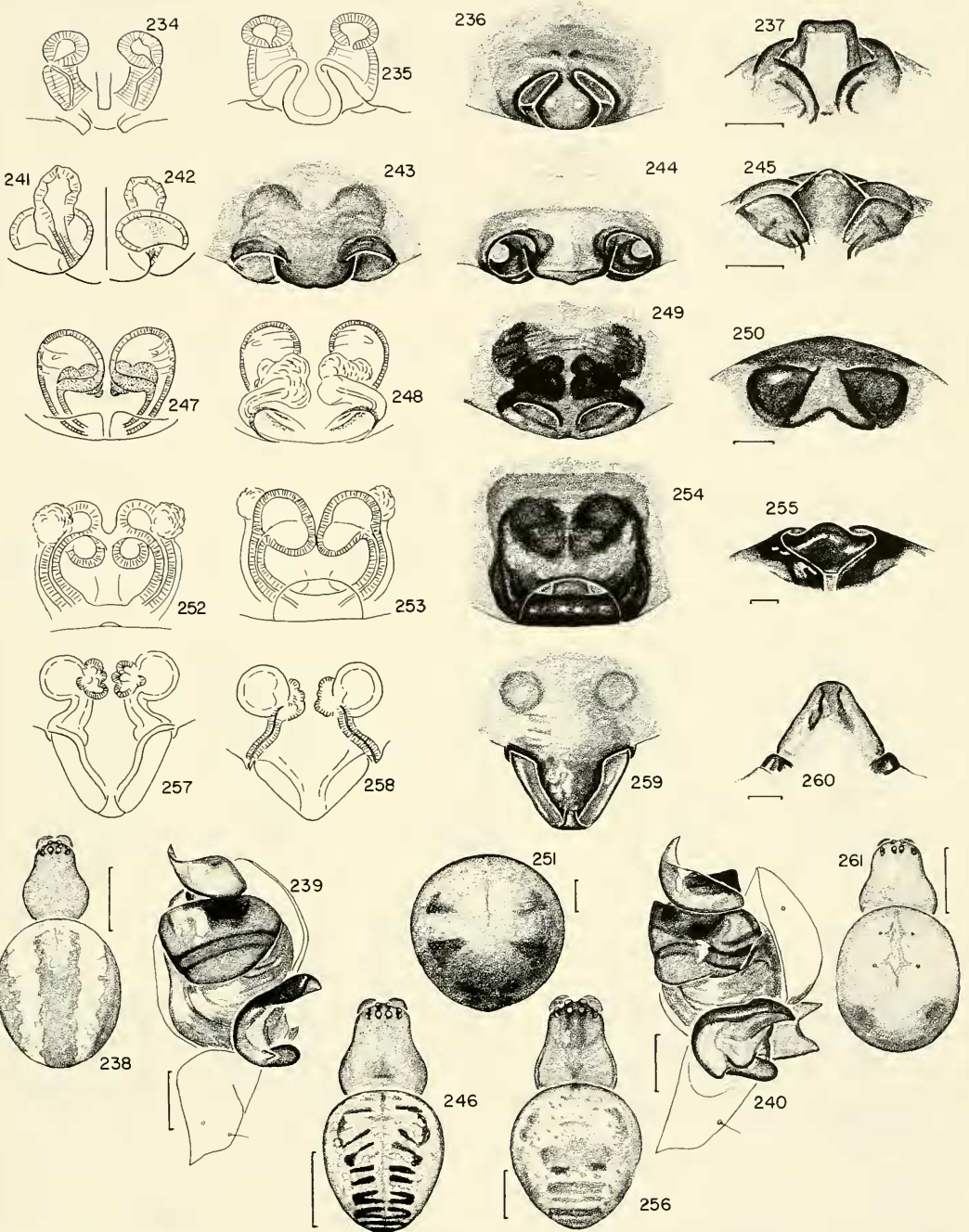
*Note.* Both depressions of the epigynum are plugged with irremovable exudate.

*Diagnosis.* Females differ by having the

Figures 234–240. *Chrysometa yunque* n. sp. 234–237. Epigynum. 234. Dorsal, cleared. 235. Ventral, cleared. 236. Ventral. 237. Posterior. 238. Female. 239, 240. Left male palpus. 239. Ventral. 240. Lateral.

Figures 241–246. *C. yotoco* n. sp. 241–245. Epigynum. 241. Dorsal, cleared. 242. Ventral, cleared. 243, 244. Ventral. 245. Posterior. 246. Female.

Figures 247–251. *C. obscura* (Bryant). 247–250. Epigynum. 247. Dorsal, cleared. 248. Ventral, cleared. 249. Ventral. 250. Posterior. 251. Female abdomen, dorsal.



Figures 252–256. *C. conspersa* (Bryant). 252–255. Epigynum. 252. Dorsal, cleared. 253. Ventral, cleared. 254. Ventral. 255. Posterior. 256. Female.

Figures 257–261. *C. magdalena* n. sp. 257–260. Epigynum. 257. Dorsal, cleared. 258. Ventral, cleared. 259. Ventral. 260. Posterior. 261. Female.

Scale lines. 0.1 mm, except Figures 238, 246, 251, 256, 261, 1.0 mm.



central depression of the epigynum divided by a median anterior lobe and lacking an anterior transverse bar (Fig. 264). Males can be separated by having a three-pointed paracymbium, cog-wheel-shaped in lateral view (Figs. 267, 268).

*Natural History, Distribution.* From 2,300 m, southern Colombia and northern Ecuador (Map 3).

*Paratypes.* COLOMBIA *Dpto. Huila:* 19 km E of Santa Leticia, 2,300 m el., March 1976, ♀ (W. Eberhard, MCZ). ECUADOR *Prov. Carchi:* Troya, 2,900–2,950 m, 10–13 June 1965, 2♀ (L. Peña, MCZ).

### *Chrysometa penai* new species

Figures 269–273; Map 3

*Holotype.* Female from Cord. Tinajillas, 3,100 m [south of Cuenca, Prov. Azuay], Ecuador, 18–21 March 1965 (L. Peña, MCZ). The species is named after the collector.

*Description.* Female. Carapace gray-orange; sternum black; coxae yellow; legs orange-gray. Dorsum of abdomen with silver platelets separated by cracks, black shoulders and gray transverse posterior marks (Fig. 273). Sides silver; venter black between epigynum and spinnerets, silver longitudinal band on each side. Secondary eyes equal to 1.3 diameters of anterior medians. Anterior median eyes slightly more than their diameter apart, 1.6 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Abdomen oval (but specimen shriveled). Total length, 4.7 mm.

Carapace, 1.8 mm long, 1.5 mm wide. First femur, 2.5 mm; patella and tibia, 2.8 mm; metatarsus, 2.3 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 1.0 mm; fourth, 1.5 mm.

*Diagnosis.* This species differs from *C. pilimbala* by having the depression of the epigynum twice as wide as long (Fig. 271).

*Paratype.* ECUADOR *Prov. Pichincha:* Quito, paramo, 3,400 m, 25 April 1942, 2♀ (H. Frizzell, O. L. Haught, EPC).

### *Chrysometa pilimbala* new species

Figures 274–280; Map 3

*Holotype.* Female holotype with 14 female, 4 male paratypes from Parque Nacional Puracé, path from Pilimbala to Volcán Puracé, 3,690 m, 12–13 Jan. 1943, *Dpto. Cauca, Colombia* (J. A. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace grayish yellow, middle darker; sternum black; legs ringed. Dorsum of abdomen with silver spots covered by a black longitudinal median band, widest anteriorly; cardiac area without black pigment. Sides gray on silver spots; venter black with a longitudinal line of silver spots on each side. Lateral eyes equal to 1.3 diameters of anterior median eyes; posterior median eyes 1.5 diameters of anterior median eyes. Anterior median eyes slightly more than their diameter apart, 1.8 diameters from laterals. Posterior median eyes 0.8 diameters apart, 1.3 diameters from laterals. Abdomen oval. Total length, 5.2 mm. Cara-

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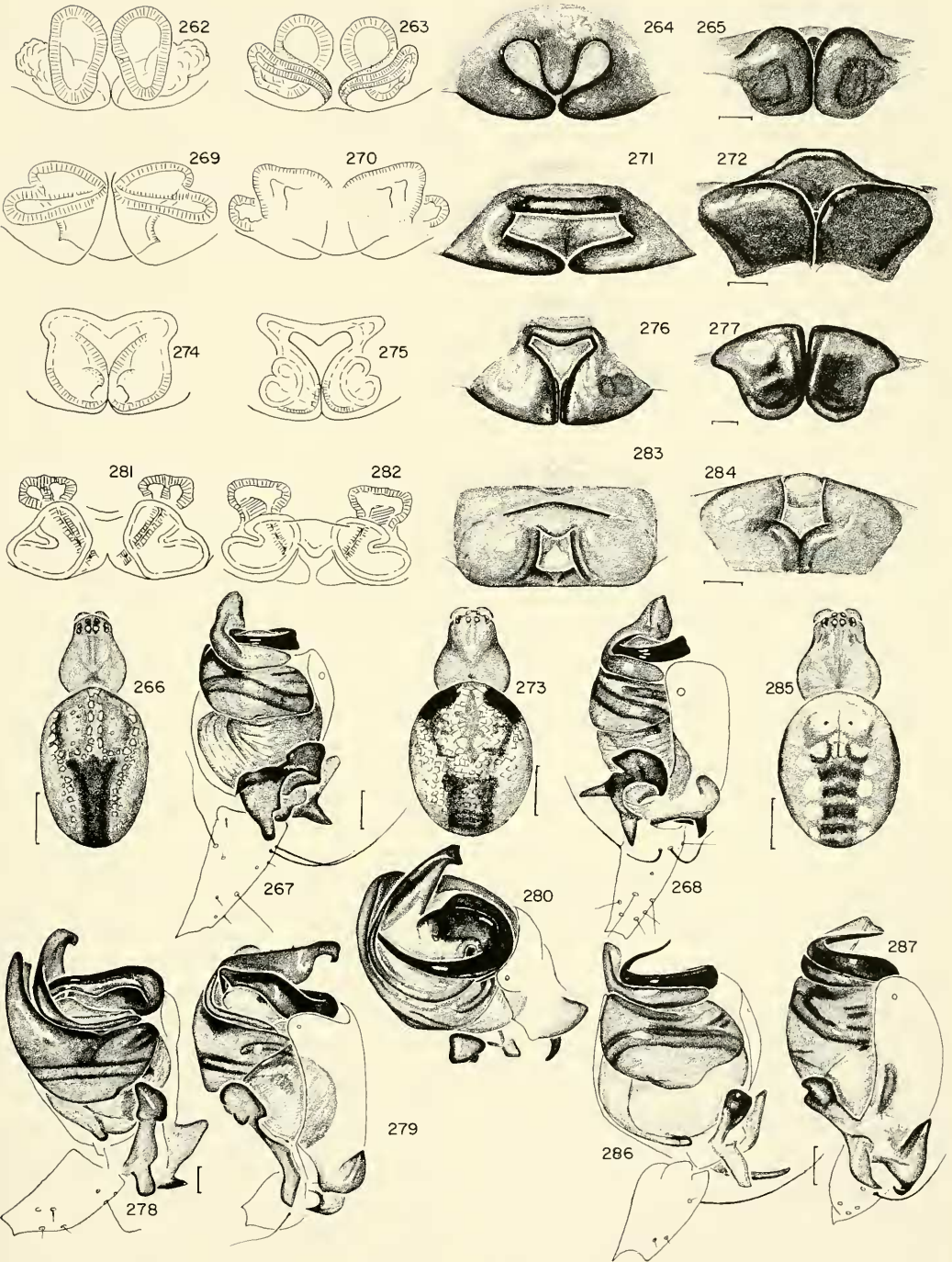
Figures 262–268. *Chrysometa huila* n. sp. 262–265. Epigynum. 262. Dorsal, cleared. 263. Ventral, cleared. 264. Ventral. 265. Posterior. 266. Female. 267, 268. Left male palpus. 267. Ventral. 268. Lateral.

Figures 269–273. *C. penai* n. sp. 269–272. Epigynum. 269. Dorsal, cleared. 270. Ventral, cleared. 271. Ventral. 272. Posterior. 273. Female.

Figures 274–280. *C. pilimbala* n. sp. 274–277. Epigynum. 274. Dorsal, cleared. 275. Ventral, cleared. 276. Ventral. 277. Posterior. 278–280. Male palpus. 278. Ventral. 279. Lateral. 280. Apical.

Figures 281–287. *C. kochalkai* n. sp. 281–284. Epigynum. 281. Dorsal, cleared. 282. Ventral, cleared. 283. Ventral. 284. Posterior. 285. Female. 286, 287. Male palpus. 286. Ventral. 287. Lateral.

*Scale lines.* 0.1 mm, except Figures 266, 273, 285, 1.0 mm.



pace, 2.0 mm long, 1.5 mm wide. First femur, 2.5 mm; patella and tibia, 3.0 mm; metatarsus, 2.3 mm; tarsus, 1.0 mm. Second patella and tibia, 2.0 mm; third, 1.1 mm; fourth, 1.6 mm.

Male. Coloration like female. Abdomen with less black pigment, but with indistinct posterodorsal transverse marks. Eyes subequal in size. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 4.4 mm. Carapace, 2.1 mm long, 1.6 mm wide. First femur, 3.1 mm; patella and tibia, 3.9 mm; metatarsus, 3.5 mm; tarsus, 1.2 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.7 mm.

*Diagnosis.* Females differ from *C. penai* and *C. kochalkai* by having the depression of the epigynum subtriangular and as wide as long (Fig. 276). The male can be separated from others by the stalked paracymbium and by the small distal hook of the conductor of the palpus (Figs. 278, 279).

*Paratypes.* Deposited as follows: ♀, ♂ MCZ; ♀ AMNH; ♀, ♂ USNM; ♀, ♂ BMNH; 10♀, ♂ IBNA.

### *Chrysometa kochalkai* new species

Figures 281–287; Map 3

*Holotype.* Female holotype with two male, four female paratypes from Río Donachui, timberline, 4,000 m, Sierra Nevada de Santa Marta, Colombia, 18 Jan. 1974 (J. A. Kochalka, MCZ). This species is named after the collector.

*Description.* Female. Carapace yellow-white with black marks; sternum black; legs with narrow black rings. Dorsum of abdomen with usual black markings and posterior longitudinal black band, no silver spots (Fig. 285). Secondary eyes equal to 1.2 diameters of anterior medians. Anterior median eyes 1.2 diameters apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Cara-

pace, 1.8 mm long, 1.5 mm wide. First femur, 2.5 mm; patella and tibia, 3.1 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

Male. Coloration like female. Secondary eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Total length, 3.7 mm. Carapace, 1.6 mm long, 1.3 mm wide. First femur, 2.8 mm; patella and tibia, 3.6 mm; metatarsus, 3.4 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.0 mm; fourth, 1.6 mm.

*Diagnosis.* The epigynum differs from that of *C. pilimbala* and *C. penai* by having a square-shaped depression (Fig. 283). Males differ from related species by the relatively short “upper” stalk of the paracymbium and the slender embolus of the palpus (Figs. 286, 287).

*Records.* COLOMBIA *Dpto. Magdalena*, Sierra Nevada de Santa Marta: Río Donachui, 3,800 m, 5 Jan. 1974, ♀, imm., 3,600 m, 2 Jan. 1973, 6♀, 8 imm. (J. Kochalka, IBNA, AMNH, BMNH, USNM).

### *Chrysometa satura* new species

Figures 288–292; Map 3

*Holotype.* Female from Cerro de La Muerte, Cartago Prov., Costa Rica, 9 Aug. 1983 (J. Coddington, MCZ). The specific name is an arbitrary combination of letters.

*Description.* Female. Carapace yellow with black pattern. Sternum black; legs ringed black on yellow. Dorsum of abdomen black with gray and silver marks (Fig. 292); venter black with longitudinal line of silver spots on each side. Eyes subequal in size. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes their diameter apart, 1.7 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 2.5 mm; patella and tibia, 3.1 mm;



metatarsus, 2.5 mm; tarsus, 1.0 mm. Second patella and tibia, 1.9 mm; third, 1.1 mm; fourth, 1.2 mm.

**Diagnosis.** The epigynum of this species differs by being heavily sclerotized with a transverse anterior bar lacking a posterior lip, and by the two comma-shaped openings separated by a narrow septum (Fig. 290).

***Chrysometa bella* (Banks),  
new combination**

Figures 293–300; Map 3

*Pseudometa bella* Banks, 1909: 208, pl. 6, fig. 30, ♂. Male holotype from Santa María, Prov. San José, Costa Rica (MCZ), examined. Roewer, 1942: 922. Bonnet, 1957: 3817.

**Description.** Female. Carapace orange-yellow with longitudinal gray band. Sternum black; legs ringed. Dorsum of abdomen with silver spots, anteriorly with pairs of transverse bars, posteriorly with a black folium (Fig. 297); venter black between epigynum and spinnerets, with longitudinal white line on each side. Anterior lateral eyes, posterior median eyes 1.2 diameters of anterior median eyes; posterior lateral eyes equal to diameter of anterior medians. Anterior median eyes slightly more than their diameter apart, 1.2 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 5.3 mm. Carapace, 2.4 mm long, 1.7 mm wide. First femur, 3.2 mm; patella and tibia, 3.8 mm; metatarsus, 3.2 mm; tarsus, 1.2 mm. Second patella and tibia, 2.6 mm; third, 1.3 mm; fourth, 1.9 mm.

Male. Carapace orange with darker patches and light median line; sternum black; legs light yellow. Dorsum of abdomen with gray anteriorly, in middle a pair of white patches, posterior with a black longitudinal band, sides silvery dorsally; venter black with pair of longitudinal white lines. Lateral eyes equal to 1.2 diameters of anterior median eyes; posterior median eyes equal to 1.3 diameters of an-

terior median eyes. Anterior median eyes slightly more than their diameter apart, 1.3 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.2 diameters from laterals. Total length, 3.8 mm. Carapace, 2.0 mm long, 1.3 mm wide. First femur, 3.9 mm; patella and tibia, 4.5 mm; metatarsus, 4.8 mm; tarsus, 1.3 mm. Second patella and tibia, 2.5 mm; third, 1.1 mm; fourth, 2.0 mm.

**Note.** Male and female have not been collected together but have been matched because of their similarity. There is the possibility that the female of *C. satura* belongs with the male *C. bella*.

**Diagnosis.** The female epigynum differs from that of *C. satura* and *C. pichincha* by the more distinct posteriorly pointing transverse bar and by the oblique openings separated by more than their length (Fig. 295). The short biforked embolus, one fork being the terminal apophysis, separates the male from others with a stalked paracymbium (Figs. 298–300).

**Record.** COSTA RICA Prov. Cartago: Cerro de la Muerte, 18 Feb. 1979, ♀ (J. Coddington, MCZ).

***Chrysometa pichincha* new species  
Figures 301–304; Map 3**

**Holotype.** Female from road between Quito and Santo Domingo, 2,300–2,400 m, Prov. Pichincha, Ecuador, 13–25 Feb. 1965 (L. Peña, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace, legs orange; labium, sternum black. Dorsum of abdomen with silver spots less than their diameter apart, longitudinal band wider anteriorly than posteriorly, sides of band parallel posteriorly and with dark patches and silver spots in center. Sides of abdomen with silver patches; venter black with a longitudinal silver line on each side. Anterior lateral eyes equal to 1.3 diameters of anterior medians; posterior eyes equal to 1.8 diameters of anterior median eyes. Anterior median eyes 1.5 diameters apart,

3 from laterals. Posterior median eyes their diameter apart, 2 from laterals. Abdomen elongate oval. Total length, 5.4 mm. Carapace, 2.0 mm long, 1.6 mm wide. First femur, 2.8 mm; patella and tibia, 3.6 mm; metatarsus, 3.6 mm; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.3 mm; fourth, 1.9 mm.

**Diagnosis.** The straight transverse bar of the epigynum separates *C. pichincha* from *C. bella*, as do the openings, which are much further apart in *C. pichincha* (Fig. 303).

***Chrysometa ecarup* new species**  
Figures 305–309; Map 3

**Holotype.** Female holotype and two female paratypes from Puracé Natl. Park, path from Pilimbalá to Volcán Puracé, 3,690 m, Colombia, 12–13 Jan. 1983 (J. Kochalka, MCZ). The specific name is an anagram of the locality.

**Description.** Carapace yellow with black marks; sternum black. Dorsum of abdomen black anteriorly, posteriorly with black folium; venter black with a light line on each side containing silver spots. Secondary eyes equal to 1.3 diameters of anterior medians. Anterior median eyes their diameter apart, slightly more than their diameter from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen shield-shaped (Fig. 309) with two humps. Total length, 4.4 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 2.7 mm; patella and tibia, 3.2 mm; metatarsus, 2.7 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

**Diagnosis.** This species differs from *C. pichincha* and *C. bella* by having the openings of the epigynum hidden under the transverse bar (Fig. 307).

***Chrysometa zelotypa* (Keyserling),**  
new combination

Figures 310–333; Map 3

*Epeira zelotypa* Keyserling, 1883: 202, pl. 15, fig. 7, ♀. Female holotype from San Mateo [Dpto. Lima], Peru, 3,000 m (PAN), examined; two juvenile paratypes, one in BMNH. Keyserling, 1893, 4: 141, pl. 7, fig. 104, ♀.

*Meta alticola* Berland, 1913: 90, pl. 8, figs. 31–35, ♂, ♀. Seven female syntypes from Casitagua [Cerro Casitagua, 0°2'S, 78°29'W], male from Tulcán [Carchi Prov.], Ecuador, lost. Roewer, 1942: 918. Bonnet, 1957: 2785. NEW SYNONYMY.

*Aranea zelotypa*:—Roewer, 1942: 857.

*Araneus zelotypus*:—Bonnet, 1957: 632.

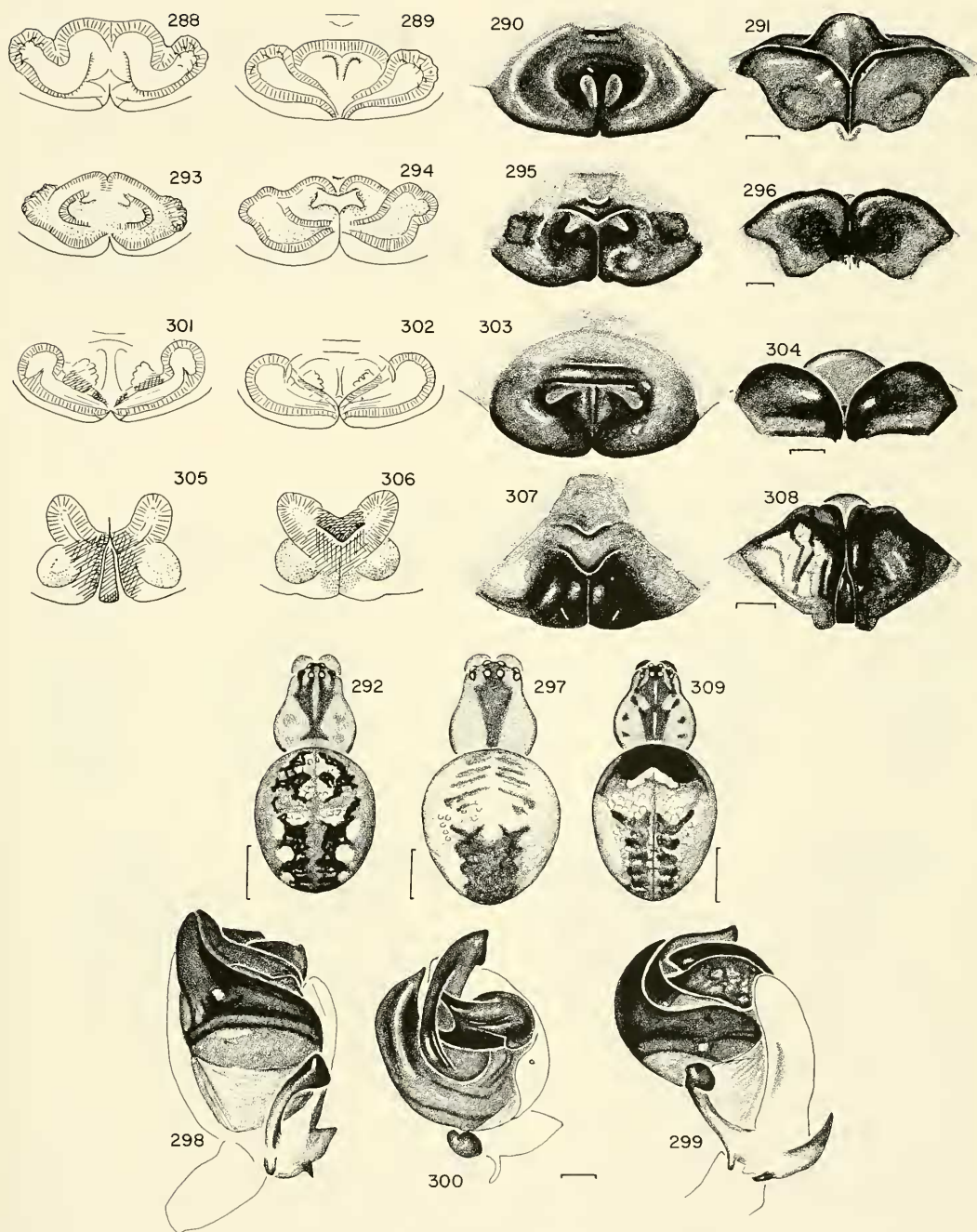
**Note.** Berland's illustrations of the palpus (figs. 33, 34) place the male in this species; the female may be another species.

**Description.** Female type of *E. zelotypa*. Carapace with fine median light line, border of carapace lighter brown, with pigment streaking from center towards sides. Sternum dark brown, coxae light; legs with fine dark rings on light. Dorsum of abdomen with dark folium, scattered white pigment spots to sides of folium, black on shoulders (Figs. 325, 327); venter with two white lines, intermediate area black, enclosing some white spots posteriorly (Fig. 326). Secondary eyes slightly larger than anterior medians. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen triangular with pair of anterior humps. Total length, 4.0 mm. Carapace, 1.7 mm long, 1.4 mm wide. First femur, 2.6 mm; patella and tibia, 2.9 mm; metatarsus, 2.3 mm; tarsus, 1.0 mm. Second patella and tibia, 1.9 mm; third, 0.9 mm; fourth, 1.6 mm.

**Male.** Coloration like female. Eyes subequal in size. Anterior median eyes slight-

Figures 288–292. *Chrysometa satura* n. sp. 288–291. Epigynum. 288. Dorsal, cleared. 289. Ventral, cleared. 290. Ventral. 291. Posterior. 292. Female.

Figures 293–300. *C. bella* (Banks). 293–296. Epigynum. 293. Posterior, cleared. 294. Ventral, cleared. 295. Ventral. 296. Posterior. 297. Female. 298–300. Left male palpus. 298. Ventral. 299. Lateral. 300. Apical.



Figures 301–304. *C. pichincha* n. sp., epigynum. 301. Dorsal, cleared. 302. Ventral, cleared. 303. Ventral. 304. Posterior.

Figures 305–309. *C. ecarup* n. sp. 305–308. Epigynum. 305. Dorsal, cleared. 306. Ventral, cleared. 307. Ventral. 308. Posterior. 309. Female.

Scale lines. 0.1 mm, except Figures 292, 297, 309, 1.0 mm.



ly more than their diameter apart, 1.5 diameters from laterals. Posterior median eyes slightly more than their diameter apart, 1.5 diameters from laterals. Total length, 4.2 mm. Carapace, 2.1 mm long, 1.7 mm wide. First femur, 4.4 mm; patella and tibia, 5.3 mm; metatarsus, 5.8 mm; tarsus, 1.5 mm. Second patella and tibia, 2.8 mm; third, 1.3 mm, fourth, 2.1 mm.

*Variation.* Specimens from no two localities are alike. Males vary in the genitalia (Figs. 328–333); all were at first considered different species. The few males available and the differences in paracymbium shape (Figs. 329, 332) suggest that this may indeed be so. The type specimen of *zelotypa* has a short abdomen with humps (Fig. 327), while all other females had an oval abdomen (Fig. 325). Females varied in total length from 3.5 to 5.1 mm.

*Diagnosis.* The female epigynum differs from similar species by the large oval depression sometimes containing a median swelling or ridge and by having a transverse bar or lobe anterior to the depression (Figs. 312, 316, 320, 323). The male palpus has a stalked paracymbium, the conductor is widened at its base and the base of the embolus and terminal apophysis has a wide pointed lobe (Figs. 328–333).

*Natural History, Distribution.* Found at high elevations 2,400 to 3,500 m, Costa Rica, Venezuela to Peru (Map 3).

*Records.* COSTA RICA *Prov. Heredia:* Volcán Poás, summit 2,400 m, 28 June 1979, ♀ (J. Coddington, USNM). *Cartago:* Volcán Irazú, 2,400 m, 6 Aug. 1963, ♀ (W. Peck, EPC), 3,400 m, 26 Nov. 1955, ♀ (B. Malkin, AMNH); Cerro de la Muerte, 30 July 1980, ♀ (J. Coddington, MCZ). PANAMA *Prov. Chiriquí:* Cerro Punta near Guadalupe, 2,500 m, 25 Oct. 1983, ♀ (Y. D. Lubin, MCZ). VENEZUELA *Est. Mérida:* Paramo Mucubaji, 3,400 m, on Highway 1, 3 km from intersection of Highway 7, 13 Jan. 1985, ♀ (J. Palmer, MCZ). COLOMBIA *Dpto. Nariño:* 26 km

east of Santiago, 3 March 1955, ♀ (E. I. Schlinger, E. S. Ross, CAS). ECUADOR *Prov. Carchi:* Volcán Chiles, 2,000–3,100 m, 26, 27 June 1965, ♀ (L. Peña, MCZ); Troya, 2,900–2,950 m, 10, 13 June 1965, 2♀, 2♂ (L. Peña, MCZ); *Pichincha:* Quito, Santo Domingo Rd., 2,500 m, 25 Apr. 1942, 2♀, nr. Quito, paramo, 3,400 m, 25 Apr. 1942, 2♀, 2 imm. (O. L. Haught, H. E. Frizzell, EPC). *Napo:* E of Papallacta, 6–8 Oct. 1977, 10♀, 3♂, 7 imm. (L. Peña, AMNH). *Tungurahua:* Minza Chica, paramo, 3,500 m, April 1939, 2♀ (F. M. Brown, AMNH). *Bolívar:* Hda. Talahua, 3,100 m, 29 Apr. 1939, ♀ (F. M. Brown, AMNH).

### *Chrysometa bigibbosa* (Keyserling), new combination

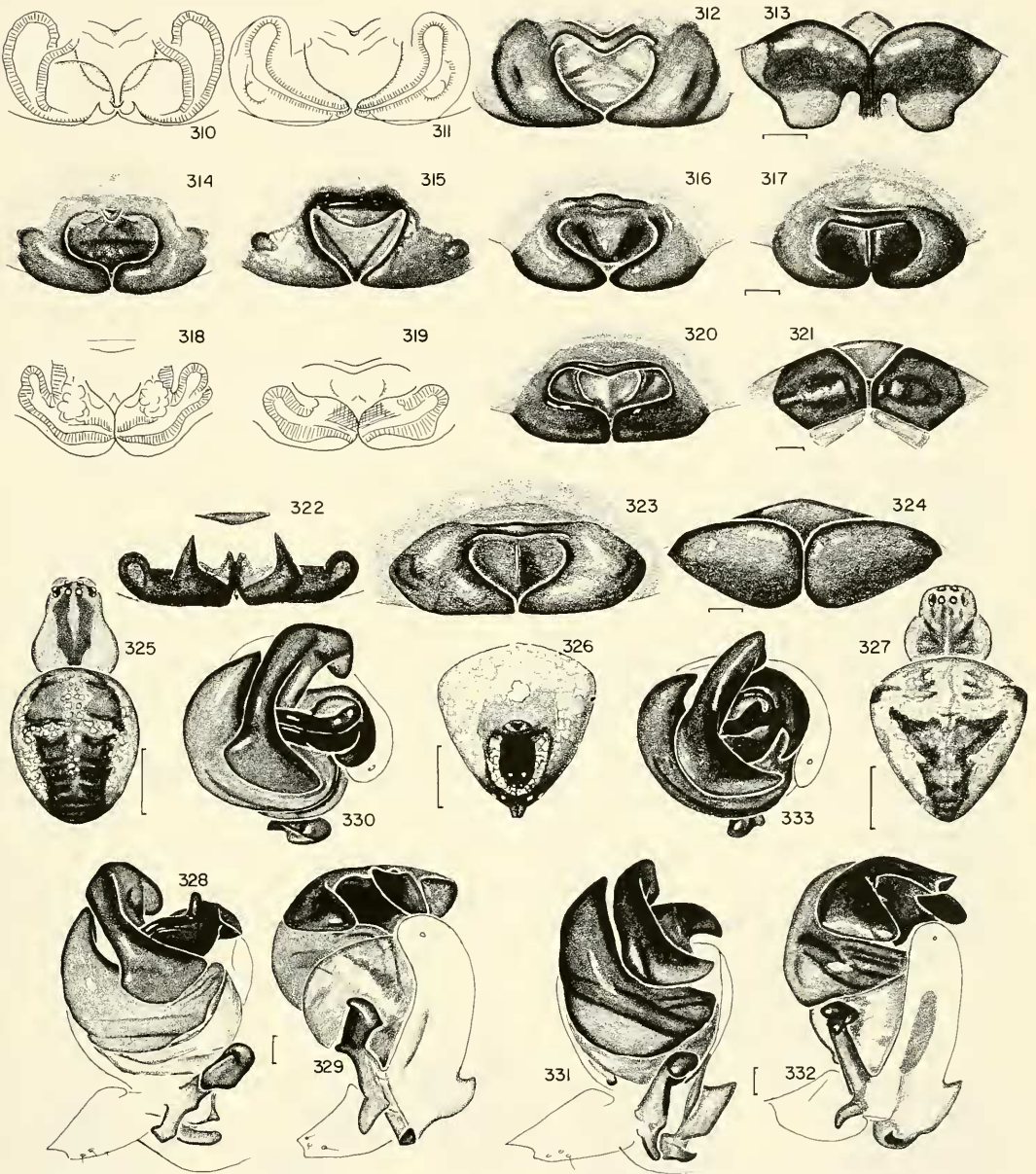
Figures 334–340; Map 3

*Tetragnatha bigibbosa* Keyserling, 1863: 144, pl. 7, figs. 1, 2, ♀. Female holotype from Bogotá, Colombia (BMNH), examined.

*Argyropeira bigibbosa:*—Keyserling, 1893: 330, pl. 17, fig. 244, ♀.

*Leucauge bigibbosa:*—Petrunkévitch, 1930: 273. Roewer, 1942: 1009. Bonnet, 1957: 2463.

*Description.* Female. Carapace yellowish white with median white pigment patch and two pairs of dark spots on thorax. Sternum brown, maculated, with median white pigment patch; legs yellowish. Dorsum of abdomen with large and small white pigment spots, arranged in distinctive pattern (Fig. 338); sides with white pigment spots; venter with two lateral longitudinal bands of large white pigment spots in between smaller pigment spots (Fig. 339); dark pigment surrounding white patches posteriorly on venter and on sides of humps. Eyes subequal in size. Anterior median eyes 1.4 diameters apart, 2.4 diameters from laterals. Posterior median eyes 1.4 diameters apart, 2.4 diameters from laterals. Abdomen oval with two slender tubercles (Figs. 338, 340). Total length, 6.8 mm. Carapace, 3.0 mm long, 2.3 mm wide. First femur, 5.5 mm; patella and tibia, 6.8 mm; metatarsus, 6.3



Figures 310–333. *Chrysometa zelotypa* (Keyserling). 310–324. Epigynum. 310, 318, 322. Dorsal, cleared. 311, 319. Ventral, cleared. 312, 314–317, 320, 323. Venter. 313, 321, 324. Posterior. 310–313. (Panama). 314. (Costa Rica). 315. (Venezuela). 316. (Prov. Carchi, Ecuador). 318–321. (Quito, Ecuador). 322–324. (Holotype, Peru). 325–327. Female. 326. Abdomen, ventral. 325. (Panama). 326, 327. (Holotype, Peru). 328–333. Male left palpus. 328, 331. Ventral. 329, 332. Lateral. 330, 333. Apical. 328–330. (Prov. Carchi, Ecuador). 331–333. (Prov. Napo, Ecuador).

Scale lines. 0.1 mm, except Figures 325–327, 1.0 mm.

mm; tarsus, 1.8 mm. Second patella and tibia, 4.3 mm; third, 2.4 mm; fourth 3.8 mm.

**Diagnosis.** The species differs from *C. explorans* by having anterior tubercles on the abdomen (Figs. 338, 340) and the epigynum with a wider scape and depressions (Fig. 336).

***Chrysometa explorans* (Chamberlin),  
new combination**

**Figures 341–345; Map 3**

*Meta explorans* Chamberlin, 1916: 242, pl. 18, fig. 5, ♀. Female holotype from Conservidayo River [Conservidayo, Dpto. Cuzco], Peru (MCZ), examined. Roewer, 1942: 918. Bonnet, 1957: 2786.

**Description.** Female. Carapace orange with lighter dorsal mark. Labium, sternum black; legs orange. Dorsum of abdomen with white pigment spots, posteriorly with a darker longitudinal band containing darker spots (Fig. 345); venter gray with parallel white lines. Anterior lateral eyes 1.5 diameters of anterior medians; posterior median eyes 1.5 diameters, posterior laterals equal to diameter of anterior medians. Anterior median eyes slightly more than their diameter apart, 1.8 diameters from laterals. Posterior median eyes their diameter apart, 1.9 from laterals. Abdomen oval with small humps. Total length, 5.5 mm. Carapace, 2.2 mm long, 1.7 mm wide. First femur, 2.7 mm; patella and tibia, 3.5 mm; metatarsus, 2.9

mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.2 mm; fourth, 1.9 mm.

**Note.** It is possible that these specimens belong to *C. bigibbosa*.

**Diagnosis.** This species differs from *C. bigibbosa* by having only indistinct humps on the abdomen (Fig. 345) and having the epigynum with a narrower scape and depressions (Fig. 343).

**Records.** PERU *Dpto. Cuzco*: Cuzco, 3,300 m, Aug. 1965, ♀ (P. Wygodzinsky, AMNH); Tincochaca, 2,300 m, Aug. 1911, ♀ (Yale Peruv. Exped., MCZ); Urubamba, 3,100 m, July 1911, ♀ (Yale Peruv. Exped., MCZ).

***Chrysometa macintyre* new species  
Figures 346–350; Map 3**

**Holotype.** Female from Prov. Tungurahua, 2,600 m, Ecuador, 6 May 1939 (W. Clarke-Macintyre, AMNH). The species is named after the collector.

**Description.** Female. Carapace dark orange; sternum brown; legs dark orange. Dorsum of abdomen with tiny silver spots and pair of black marks; sides with silver spots (Fig. 350); venter with dusky rectangular mark in center, with line of silver spots on each side, sides with silver spots. Secondary eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, slightly more than their

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Figures 334–340. *Chrysometa bigibbosa* (Keyserling). 334–337. Epigynum. 334. Dorsal, cleared. 335. Ventral, cleared. 336. Ventral. 337. Posterior. 338–340. Female. 339, 340. Abdomen. 339. Ventral. 340. Lateral.

Figures 341–345. *C. explorans* (Chamberlin). 341–344. Epigynum. 341. Dorsal, cleared. 342. Ventral, cleared. 343. Ventral. 344. Posterior. 345. Female.

Figures 346–350. *C. macintyre* n. sp. 346–349. Epigynum. 346. Dorsal, cleared. 347. Ventral, cleared. 348. Ventral. 349. Posterior. 350. Female.

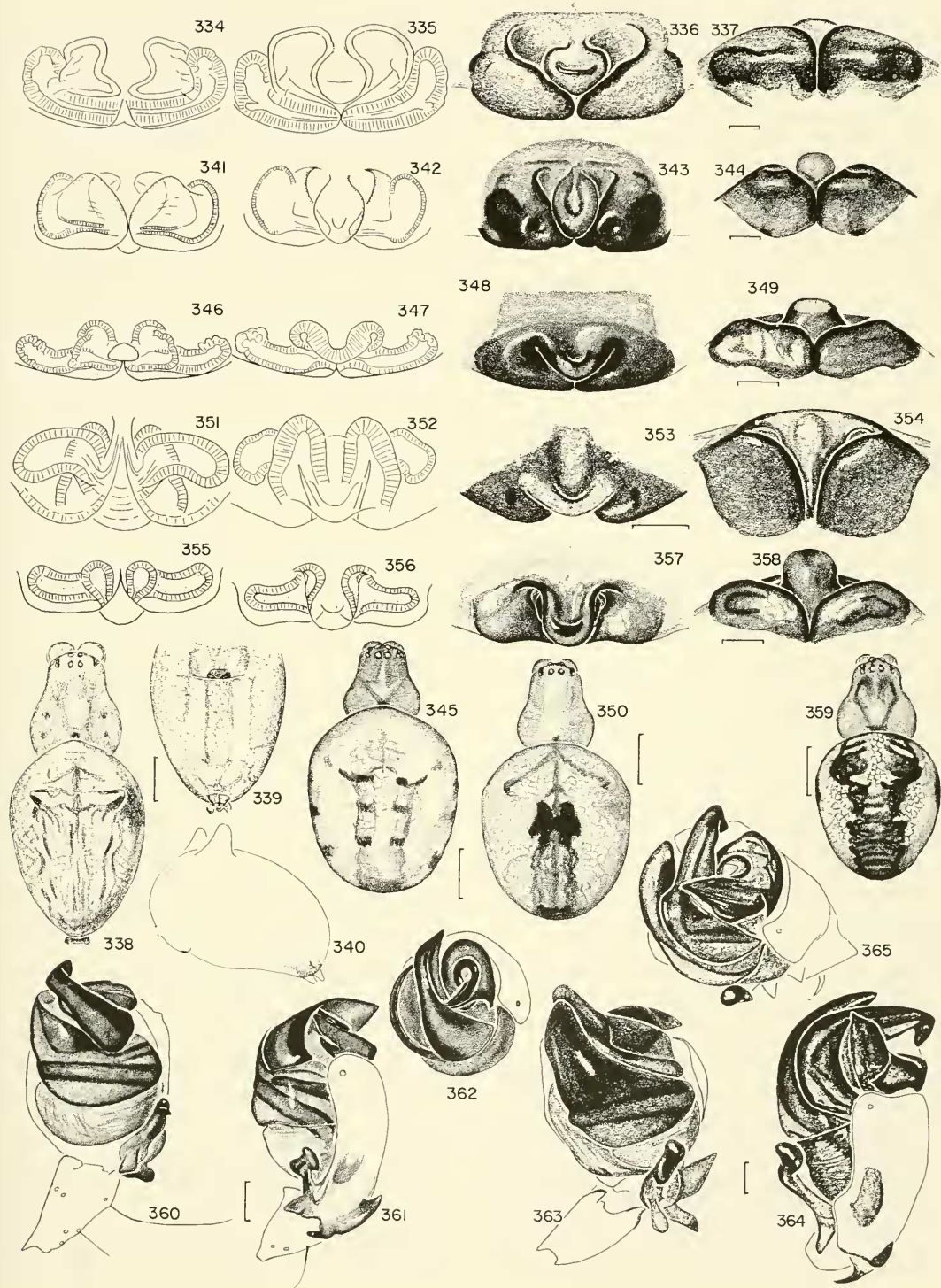
Figures 351–354. *C. bolivari* n. sp., epigynum. 351. Dorsal, cleared. 352. Ventral, cleared. 353. Ventral. 354. Posterior.

Figures 355–362. *C. cuenca* n. sp. 355–358. Epigynum. 355. Dorsal, cleared. 356. Ventral, cleared. 357. Ventral. 358. Posterior. 359. Female. 360–362. Left male palpus. 360. Ventral. 361. Lateral. 362. Apical.

Figures 363–365. *C. monticola* (Keyserling), male palpus. 363. Ventral. 364. Lateral. 365. Apical.

**Scale lines.** 0.1 mm, except Figures 338–340, 345, 350, 359, 1.0 mm.





diameter from laterals. Abdomen shield-shaped with slight shoulder humps. Total length, 5.2 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 2.7 mm; patella and tibia, 3.2 mm; metatarsus, 2.8 mm; tarsus, 1.0 mm. Second, 2.0 mm; third, 1.1 mm; fourth, 1.5 mm.

*Diagnosis.* The epigynum of this species differs from that of *C. bolivari* by having a narrower median scape (Fig. 348) and shorter posterior lateral plates (Fig. 349).

*Chrysometa bolivari* new species  
Figures 351–354; Map 3

*Holotype.* Female from Hacienda Talahua, 3,100 m, Prov. Bolívar, Ecuador, 29 April 1939 (F. M. Brown, AMNH). The species is named after Simón Bolívar.

*Description.* Female. Carapace orange with symmetrical gray maculations and light median line; thorax with black on margin and white pigment spot anterior to depression; chelicerae dark orange; sternum blackish; legs ringed. Dorsum of abdomen with white pigment spots, black shoulder marks, and posterior black band having sides almost parallel. Anterior lateral eyes 1.5 diameters of anterior medians; posterior median eyes twice diameter, posterior laterals 1.3 diameters of anterior median eyes. Anterior median eyes 1.3 diameters apart, 1.3 diameters from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen oval. Total length, 4.0 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm; metatarsus, 3.1 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

*Note.* Specimen's abdomen is in poor preservation.

*Diagnosis.* The epigynum of this species differs from that of *C. macintyre* by having a wider scape (Fig. 353) on whose posterior face are a pair of widely separated openings; it also differs by having longer posterior plates (Fig. 354).

*Chrysometa cuenca* new species  
Figures 355–362; Map 3

*Holotype.* Female holotype, with six female, two male paratypes from south of Cuenca, 2,500–2,800 m, Prov. Azuay, Ecuador, 15 March 1965 (L. Peña, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Carapace orange with black marks (Fig. 359), white spot in center of thorax; sternum dark orange, black on sides; venter orange with indistinct black rings. Dorsum of abdomen with little silver plates almost touching, posterior with black folium (Fig. 359); venter black with white longitudinal line on each side. Eyes subequal in size. Anterior median eyes slightly more than their diameter apart, 1.7 diameters from laterals. Posterior median eyes slightly more than their diameter apart, 1.7 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 2.2 mm long, 1.5 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm; metatarsus, 3.0 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.7 mm.

Male. Coloration like female. Total length, 3.0 mm. Carapace, 1.5 mm long, 1.1 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm; metatarsus, 3.1 mm; tarsus, 1.0 mm. Second patella and tibia, 1.8 mm; third, 0.8 mm; fourth, 1.4 mm.

*Variation.* Females vary from 4.1 to 4.5 mm, males from 2.8 to 3.0 mm.

*Diagnosis.* The epigynum of the female differs from that of *C. macintyre* and *C. bolivari* by having the sides of the scape parallel (Fig. 357). It differs from that of *C. eberhardi* in posterior view by having the lateral plates covering the scape (Fig. 358). The male palpus differs from that of *C. monticola* by having a smaller conductor and terminal apophysis (Figs. 360–362).

*Natural History, Distribution.* Found at high altitudes (2,500 m), Ecuador (Map 3).

*Paratypes.* ECUADOR Prov. Pichin-

*cha*: Mt. Pichincha near Quito, Aug. 1944, (W. Prescott, MCZ); Quito, ♂ (MCZ). *Cotopaxi*: 26 km N of Latacunga, 21 Feb. 1955, 2♀ (E. I. Schlinger, E. S. Ross, CAS). *Tungurahua*: Ambato, June 1943, 6♀, ♂ (H. E., D. L. Frizzell, EPC). *Azuay*: Cuenca, 3 Apr. 1942, 2♀ (H. E., D. L. Frizzell, EPC).

*Chrysometa monticola* (Keyserling),  
new combination

Figures 363–365; Map 3

*Meta monticola* Keyserling, 1883: 204, figs. 9, 15, ♀, ♂. Male syntype (female lost) from Montana di Nancho [mountains east of Pacasmayo, 2,600 m, Dpto. Cajamarca], Peru (PAN), examined. Roewer, 1942: 919. Bonnet, 1957: 2796.

*Argyrodes monticola*:—Keyserling, 1893: 328, pl. 17, fig. 243, ♀, ♂.

**Description.** Male. Carapace, sternum, legs orange-yellow. Dorsum of abdomen with tiny silver spots (abdomen in poor condition). Venter with two gently curved white lines; the one on the spider's left side is a slightly squeezed S, the right is its mirror image. Eyes subequal in size. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes their diameter apart, 1.5 from laterals. Total length, 3.4 mm. Carapace, 1.8 mm long, 1.6 mm wide. First femur, 3.5 mm; patella and tibia, 4.3 mm; metatarsus, 4.3 mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.2 mm; fourth, 1.7 mm.

**Note.** The epigynum of the lost female pictured by Keyserling has two circular depressions divided by a septum of equal diameter. The septum might be a scape.

**Diagnosis.** This male differs from *C. zelotypa* by having the base of the conductor with a shelf (Fig. 363) and by having a pointed terminal apophysis lobe with a large, wide thorn at its base (Figs. 363, 364).

*Chrysometa minza* new species

Figures 366–372; Map 3

**Holotype.** Female holotype with female and male paratypes from Volcán Minza Chica, 3,500 m, Prov.

Tungurahua, Ecuador, April 1939 (F. M. Brown, AMNH). The specific name is a noun in apposition after the type locality. **Note.** The type locality is Paramo Minza Chica, 1°31'S, 78°25'W (F. M. Brown, 1941).

**Description.** Female. Carapace orange with darker maculations and white spot anterior to thoracic depression; sternum black on orange; legs orange with dark rings. Dorsum of abdomen with large silver spots almost their diameter apart, posteriorly with a median black band with anterolateral branch (Fig. 370); sides with some silver spots; venter black with line of silver spots on each side. Secondary eyes equal to 1.8 diameters of anterior median eyes. Anterior median eyes 1.5 diameters apart, 1.8 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 diameters from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 1.7 mm long, 1.5 mm wide. First femur, 2.5 mm; patella and tibia, 2.9 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 1.9 mm; third, 1.0 mm; fourth, 1.6 mm.

Male. Coloration like female. Anterior lateral eyes, posterior median eyes equal to 1.2 diameters of anterior medians; posterior lateral eyes equal to 1.1 diameters of anterior median eyes. Anterior median eyes their diameter apart, slightly more than their diameter from laterals. Posterior median eyes 0.6 diameters apart, their diameter from laterals. Total length, 3.4 mm. Carapace, 1.6 mm long, 1.4 mm wide. First femur, 3.1 mm; patella and tibia, 4.0 mm; metatarsus, 3.6 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.5 mm.

**Diagnosis.** The epigynum of females differs from that of *C. cuenca* by lacking a scape and from other species by having the black, median depression not bordered (Fig. 368); the male palpus differs from that of *C. cuenca* by having the basal end of the conductor enclosed by the tegulum and having the tegulum medially drawn out and pointed (Figs. 371, 372).



***Chrysometa tinajillas* new species**  
**Figures 373–377; Map 3**

*Holotype.* Female holotype with two immature paratypes from Cordillera Tinajillas, 3,100 m, south of Cuenca, Prov. Azuay, Ecuador, 18–21 March 1965 (L. Peña, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow with gray marks and white pigment spot on thorax; labium, sternum black; endites yellow; legs yellow, indistinctly ringed. Dorsum of abdomen black posteriorly, surrounded by silver spots (Fig. 377); venter black with pair of paraxial lines containing silver spots. Eyes small. Lateral eyes equal to 1.2 diameters of anterior median eyes; posterior median eyes equal to 1.3 diameters of anterior medians. Anterior median eyes 1.5 diameters apart, 2 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Total length, 4.0 mm. Carapace, 1.8 mm long, 1.5 mm wide. First femur, 2.8 mm; patella and tibia, 3.5 mm; metatarsus, 2.9 mm; tarsus, 1.1 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.8 mm.

*Diagnosis.* The epigynum of this species differs by having a transverse bar with a short anterior lip over a longitudinal groove (Fig. 375); it is bordered posteriorly by the posterior plates (Fig. 376).

*Natural History, Distribution.* Found at high elevations, Ecuador.

*Paratypes.* ECUADOR Prov. Azuay:

Cerro Tinajillas, 3,100 m, 18–21 March 1965, ♀ (L. Peña, MCZ); Lago Zurucuchu, 18 km W of Cuenca, 16 Feb. 1955, ♀ (E. I. Schlinger, E. S. Ross, CAS).

***Chrysometa sztolcmani* new species**  
**Figures 378–381**

*Holotype.* Female holotype with one female paratype from Palatayoc [place not located], Peru (K. Jelski, J. Sztoleczman, PAN). The species is named after the collector.

*Description.* Female. Carapace orange, darker on each side of head and on thoracic depression, with a median light orange line; sternum, endites black; legs orange, indistinctly ringed. Dorsum of abdomen with small silver spots almost touching, posterior two thirds with dark median band consisting of lighter and darker transverse bars, dark bars separated in middle; venter black, a light line of silver spots on each side and a silver spot on each side of spinnerets. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, 1.7 diameters from laterals. Posterior median eyes slightly more than their diameter apart, 1.7 diameters from laterals. Abdomen oval. Total length 4.8 mm. Carapace, 2.1 mm long, 1.6 mm wide. First femur, 3.0 mm; patella and tibia, 3.6 mm; metatarsus, 2.9 mm; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.2 mm; fourth 2.0 mm.

*Diagnosis.* The epigynum of this species



Figures 366–372. *Chrysometa minza* n. sp. 366–369. Epigynum. 366. Dorsal, cleared. 367. Ventral, cleared. 368. Ventral. 369. Posterior. 370. Female. 371–372. Left male palpus. 371. Ventral. 372. Lateral.

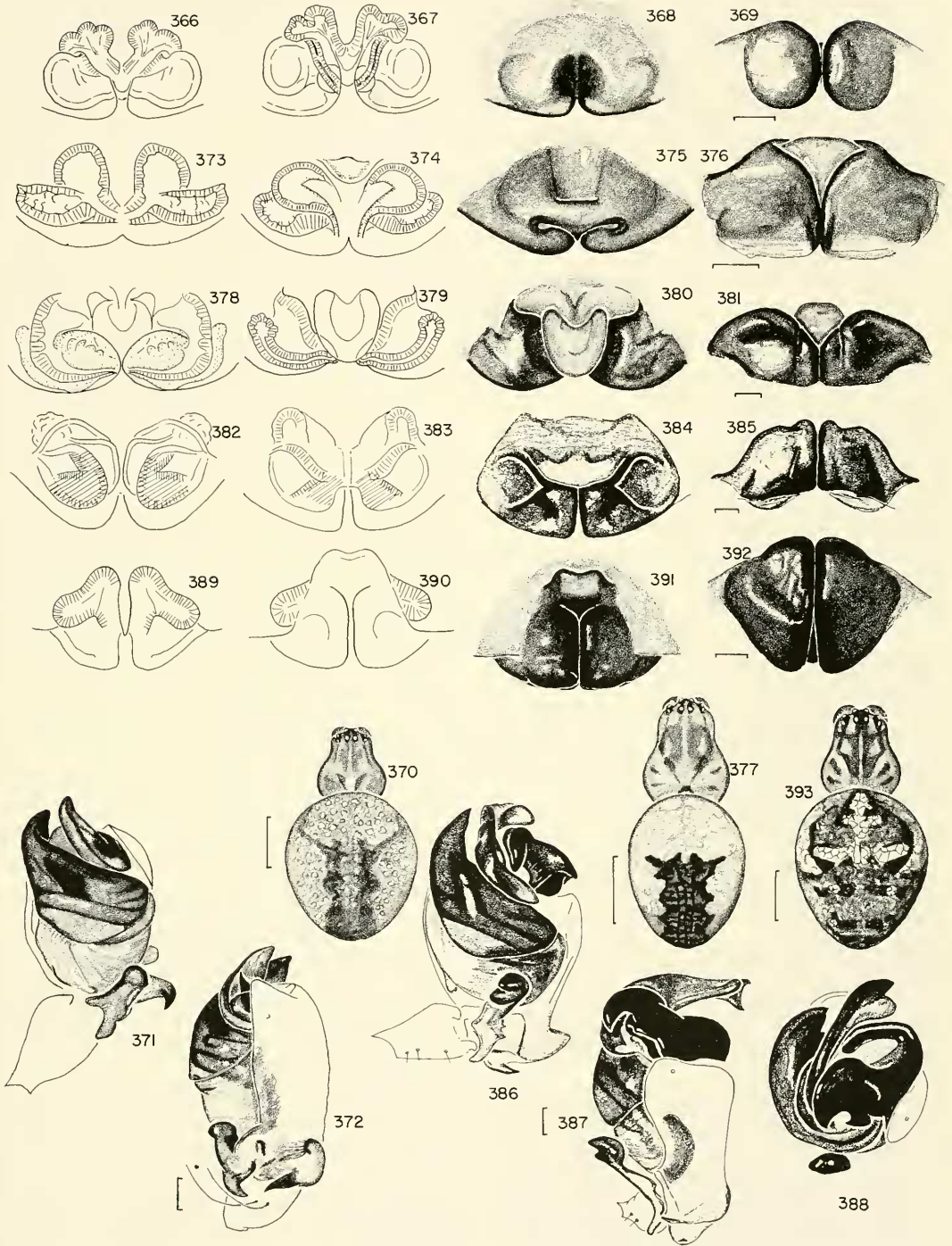
Figures 373–377. *C. tinajillas* n. sp. 373–376. Epigynum. 373. Dorsal, cleared. 374. Ventral, cleared. 375. Ventral. 376. Posterior. 377. Female.

Figures 378–381. *C. sztolcmani* n. sp., epigynum. 378. Dorsal, cleared. 379. Ventral, cleared. 380. Ventral. 381. Posterior.

Figures 382–388. *C. chica* n. sp. 382–385. Epigynum. 382. Dorsal, cleared. 383. Ventral, cleared. 384. Ventral. 385. Posterior. 386–388. Male palpus. 386. Ventral. 387. Lateral. 388. Apical.

Figures 389–393. *C. browni* n. sp. 389–392. Epigynum. 389. Dorsal, cleared. 390. Ventral, cleared. 391. Ventral. 392. Posterior. 393. Female.

*Scale lines.* 0.1 mm, except Figures 370, 377, 393, 1.0 mm.



differs from all others by having a median light-colored, heart-shaped knob (Fig. 380).

***Chrysometa chica* new species**  
**Figures 382–288; Map 3**

*Holotype.* Female holotype with four female and one male paratypes from Volcán Minza Chica, 3,500 m, Prov. Tungurahua, Ecuador, April 1939 (F. M. Brown, AMNH). The specific name is an arbitrary combination of letters. *Note.* The locality is paramo Minza Chica, 1°31'S, 78°25'W (F. M. Brown, 1941).

*Description.* Female. Carapace, legs orange-yellow; sternum dusky orange-yellow. Dorsum of abdomen with black spots, densest on sides, and median gray band darkest posteriorly; sides gray; venter with black band and white longitudinal line on each side. Secondary eyes equal to 1.5 diameters of anterior median eyes. Anterior median eyes 1.7 diameters apart, 2 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 5.6 mm. Carapace, 2.1 mm long, 1.6 mm wide. First femur, 2.8 mm; patella and tibia, 3.3 mm; metatarsus, 2.8 mm; tarsus, 1.2 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.9 mm.

Male. Coloration and eye structure like female. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 1.5 diameters from laterals. Total length, 4.0 mm. Carapace, 2.1 mm long, 1.8 mm wide. First femur, 3.2 mm; patella and tibia, 4.2 mm; metatarsus, 3.7 mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.1 mm; fourth, 1.8 mm.

*Diagnosis.* The epigynum of the female differs from all others by having a wide, median anterior lobe and lateral depressions (Fig. 384). The male differs from *C. minza* and *C. bolivari* by having a relatively small, narrow conductor that is lobed distally (Figs. 386–388).

***Chrysometa browni* new species**  
**Figures 389–393; Map 3**

*Holotype.* Female holotype with one female paratype from Volcán Minza Chica, 3,500 m, Prov. Tungurahua, Ecuador, April 1939 (F. M. Brown, AMNH). The species is named after the collector. *Note.* The type locality is paramo Minza Chica, 1°31'S, 78°25'W (F. M. Brown, 1941).

*Description.* Female. Carapace with black marks on orange, head black to thoracic depression, orange around lateral eyes and a fine median orange line; sides of thorax with two black marks and black margin (Fig. 393). Sternum black; legs orange with narrow black rings. Dorsum of abdomen with silver spots, posteriorly with gray marks and black transverse bars forming a longitudinal band; sides gray; venter black with line of silver spots on each side. Secondary eyes equal to 1.5 diameters of anterior median eyes. Anterior median eyes 1.5 diameters apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen oval, widest anteriorly. Total length, 4.8 mm. Carapace, 2.0 mm long, 1.7 mm wide. First femur, 3.3 mm; patella and tibia, 4.2 mm; metatarsus, 3.4 mm; tarsus, 1.3 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.1 mm.

*Diagnosis.* The epigynum of this species differs from all others by having an anterior median lobe bearing a light rectangular patch (Fig. 391).

***Chrysometa luisi* new species**  
**Figures 394–401; Map 3**

*Holotype.* Female holotype and male paratype from Cerro Tinajillas, 3,100 m, Azuay Prov., Ecuador, 18–21 March 1965 (L. Peña, MCZ). This species is named after the collector.

*Description.* Female. Carapace similar to *C. troya*, but more contrasting, with median light line (Fig. 398); sternum black; legs with indistinct narrow rings. Dorsum of abdomen with scattered white spots and darker pattern than in *C. troya*. Eyes subequal in size. Anterior median



eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.7 diameters from laterals. Abdomen oval. Total length, 5.0 mm. Carapace, 1.8 mm long, 1.6 mm wide. First femur, 3.2 mm; patella and tibia, 3.8 mm; metatarsus, 3.4 mm; tarsus, 1.3 mm. Second patella and tibia, 2.3 mm; third, 1.1 mm; fourth, 1.9 mm.

**Male.** Darker than female. Carapace blackish orange on sides with some areas darker brown; endites, sternum black; coxae gray; legs orange-yellow with indistinct gray rings. Abdomen with silver spots and black behind as in female, also black anteriorly on sides and on venter. Eyes subequal in size. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 1.7 diameters from laterals. Total length, 4.5 mm. Carapace, 2.1 mm long, 1.8 mm wide. First femur, 4.7 mm; patella and tibia, 5.8 mm; metatarsus, 6.2 mm; tarsus, 1.7 mm. Second patella and tibia, 3.2 mm; third, 1.4 mm; fourth, 2.3 mm.

**Diagnosis.** The epigynum of females is distinguished from others by the wide median lobe overhanging a sclerotized depression (Fig. 396); the male palpus differs from others by the large conductor and biforked embolus-terminal apophysis tip (Figs. 399–401).

#### *Chrysometa allija* new species

Figures 402–408; Map 3

**Holotype.** Female holotype and one female paratype from Cerro Tinajillas, 3,100 m, Prov. Azuay, Ecuador, 18–21 March 1965 (L. Peña, MCZ). The name is an arbitrary combination of letters.

**Description.** Female. Carapace orange, gray on each side of head and middle of thorax. Sternum brown; legs orange with indistinct black rings. Dorsum of abdomen with silver spots less than their diameter apart. Sides with black patch anteriorly; posteriorly with wide, dark median longitudinal band as in *C. chiri-*

*qui*. Venter black with longitudinal white band on each side. Eyes subequal in size. Anterior median eyes their diameter apart, 1.4 diameters from laterals. Posterior median eyes slightly more than their diameter apart, 1.7 from laterals. Abdomen oval. Total length, 4.0 mm. Carapace, 2.1 mm long, 1.5 mm wide. First femur, 3.0 mm; patella and tibia, 3.7 mm; metatarsus, 2.9 mm; tarsus, 1.0 mm. Second patella and tibia, 2.4 mm; third, 1.3 mm; fourth 1.9 mm.

**Male.** Coloration like female. Eyes subequal in size. Anterior median eyes their diameter apart, 1.4 diameters from laterals. Posterior median eyes 1.3 diameters apart, two diameters from laterals. Total length, 4.5 mm. Carapace, 2.7 mm long, 2.1 mm wide. First femur, 4.6 mm; patella and tibia, 5.6 mm; metatarsus, 5.4 mm; tarsus, 1.5 mm. Second patella and tibia, 3.5 mm; third, 1.5 mm; fourth, 2.5 mm.

**Variation.** Females vary from 4.0 to 6.7 mm total length.

**Diagnosis.** The epigynum of this species has two facing lobes with an opening at the lateral end of their anterior borders (Fig. 404). The male palpus differs from others by the twisted distal end of the conductor and the shape of the embolus and terminal apophysis (Figs. 406–408).

**Natural History.** Found at 3,000 m altitude, Ecuador (Map 3).

**Paratypes.** ECUADOR. *Prov. Bolívar:* Hda. Talahua, 3,100 m, 29 April 1939, ♀ (F. M. Brown, AMNH). *Chimborazo:* Urbina, 3,650 m, Cerro Chimborazo, 18 April 1939, 9♀, 2♂ (F. M. Brown, AMNH). *Azuay:* 52 km S of Cuenca, 3,200 m, 21 March 1965, 5♀, 12 imm. (L. Peña, MCZ).

#### *Chrysometa ura* new species

Figures 409–412; Map 3

**Holotype.** Female from Volcán Minza Chica, 3,500 m, Prov. Tungurahua, Ecuador (F. M. Brown, AMNH). The species is an arbitrary combination of letters. **Note.** The locality is paramo Minza Chica, 1°31'S, 78°26'W (F. M. Brown, 1941).

**Description.** Female. Carapace orange with indistinct dark gray marks, white pigment spot in front of thoracic depression; sternum orange with black pigment; legs orange with dark narrow rings. Dorsum of abdomen marked as in other species, with scattered silver spots, gray on shoulders, posteriorly with transverse black marks forming longitudinal band; sides gray; venter with longitudinal line of silver spots on each side. Anterior lateral eyes equal to 1.5 diameters of anterior medians; posterior eyes equal to 1.7 diameters of anterior median eyes. Anterior median eyes 1.5 diameters apart, same distance from laterals. Posterior median eyes 0.7 diameters apart, slightly less than their diameter from laterals. Abdomen subspherical, widest anteriorly. Total length, 3.7 mm. Carapace, 1.6 mm long, 1.3 mm wide. First femur, 2.3 mm; patella and tibia, 2.8 mm; metatarsus, 2.2 mm; tarsus, 0.9 mm. Second patella and tibia, 1.7 mm; third, 0.9 mm; fourth, 1.4 mm.

**Diagnosis.** Unlike the epigynum of *C. allija*, the facing lobes are separated from each other and their anterior margin surrounds a depression anteriorly on each side (Fig. 411).

### *Chrysometa troya* new species Figures 413–420; Map 3

**Holotype.** Female holotype and twelve females, 10 male paratypes from Troya, 2,900–2,950 m, Prov. Carchi, Ecuador, 10–13 June 1965 (L. Peña, MCZ).

The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange-brown with darker markings, sternum black; coxae orange; legs orange-brown with indistinct darker marks. Dorsum of abdomen with silver spots and black marks (Fig. 417); venter with pair of lines of silver spots. Eyes subequal in size. Anterior median eyes 1.2 diameters apart, 2 diameters from laterals. Posterior median eyes 1.2 diameters apart, 1.8 diameters from laterals. Abdomen oval. Total length, 5.2 mm. Carapace, 2.5 mm long, 1.9 mm wide. First femur, 3.5 mm; patella and tibia, 4.3 mm; metatarsus, 3.1 mm; tarsus, 1.2 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.0 mm.

**Male.** Coloration like female. Eyes subequal in size. Anterior median eyes slightly more than their diameter apart, 2 diameters from laterals. Posterior median eyes slightly more than their diameter apart, 2 diameters from laterals. Total length, 4.5 mm. Carapace, 2.5 mm long, 1.8 mm wide. First femur, 4.2 mm; patella and tibia, 5.2 mm; metatarsus, 5.1 mm; tarsus, 1.5 mm. Second patella and tibia, 3.0 mm; third, 1.3 mm; fourth, 2.2 mm.

**Variation.** Females vary in total length from 3.5 to 5.0 mm, males from 4.5 to 5.2 mm.

**Diagnosis.** The epigynum of females differs from that of *C. purace* by having the lateral, anterior margins of the depression continue medially into a septum (Fig.

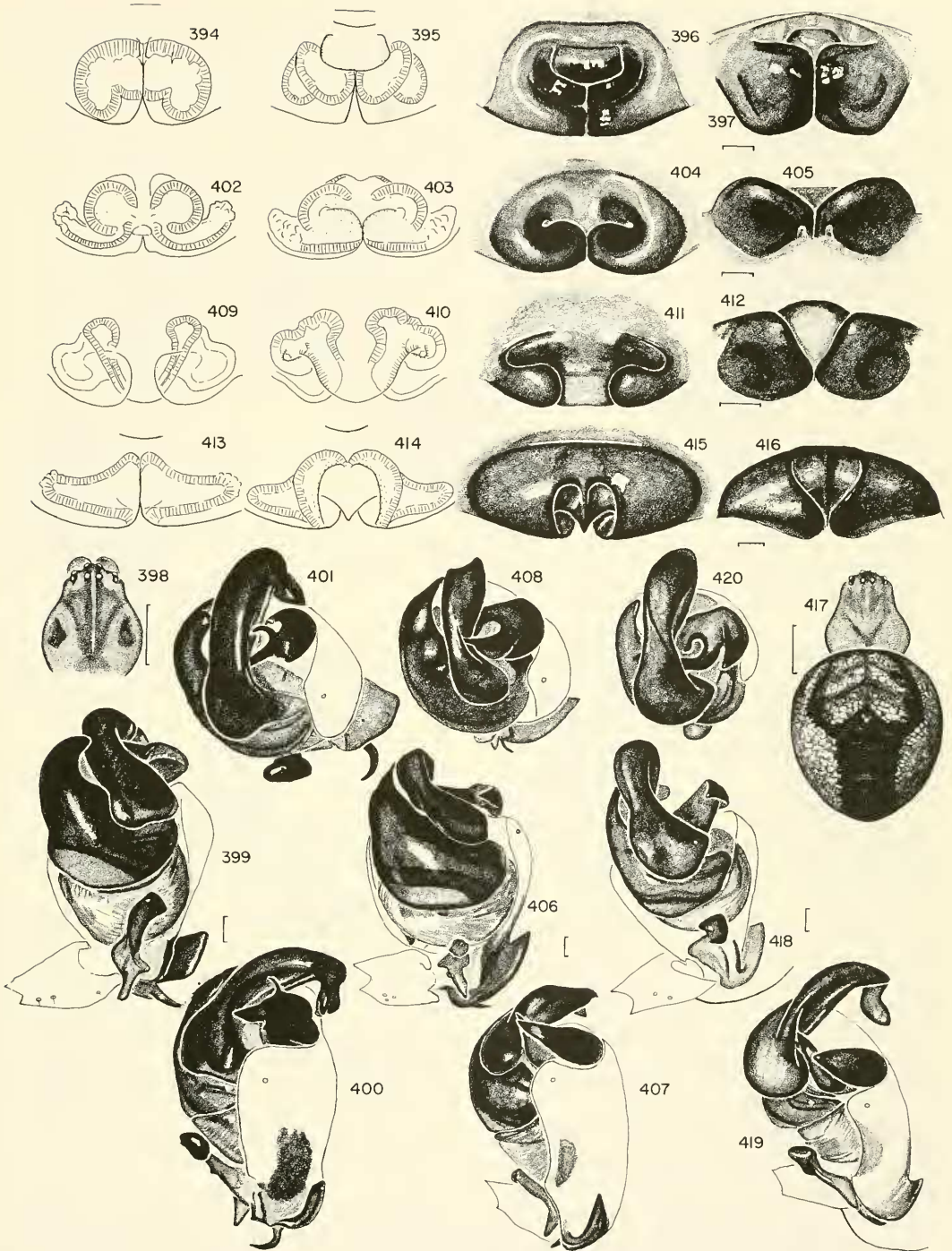
Figures 394–401. *Chrysometa luisi* n. sp. 394–397. Epigynum. 394. Dorsal, cleared. 395. Ventral, cleared. 396. Ventral. 397. Posterior. 398. Female carapace. 399–401. Left male palpus. 399. Ventral. 400. Lateral. 401. Apical.

Figures 402–408. *C. allija* n. sp. 402–405. Epigynum. 402. Dorsal, cleared. 403. Ventral, cleared. 404. Ventral. 405. Posterior. 406–408. Male palpus. 406. Ventral. 407. Lateral. 408. Apical.

Figures 409–412. *C. ura* n. sp., epigynum. 409. Subdorsal, cleared. 410. Subventral, cleared. 411. Ventral. 412. Posterior.

Figures 413–420. *C. troya* n. sp. 413–416. Epigynum. 413. Dorsal, cleared. 414. Ventral, cleared. 415. Ventral. 416. Posterior. 417. Female. 418–420. Male palpus. 418. Ventral. 419. Lateral. 420. Apical.

**Scale lines.** 0.1 mm, except Figures 398, 417, 1.0 mm.





415). The male palpus differs from that of *C. purace* by having the conductor with an s-shaped tip and by the shape of embolus and terminal apophysis (Figs. 418–420).

*Natural History, Distribution.* Found 1,800 to 3,100 m, Ecuador (Map 3).

*Paratypes.* ECUADOR *Prov. Carchi:* Troya, 2,900 m, 10–13 June 1965, 3♀, ♂ (L. Peña, MCZ); Volcán Chiles, 2,000–3,100 m, 26, 27 June 1965, ♀ (L. Peña, MCZ); Cerro Pelado, S of Tulcán, 3,200 m, 25 June 1965, 2♀, 16 imm. (L. Peña, MCZ); Tulcán, El Carmelo, 3,350 m, 11 Sept. 1977, 9♀, 8♂ (L. Peña, AMNH). *Zamora-Chinchipe:* Zamora, 1,800–2,200 m, 28 Oct. 1977, ♀ (L. Peña, AMNH).

*Chrysometa purace* new species  
Figures 421–428; Map 3

*Holotype.* Female holotype and one male paratype from Paramo Puracé, 11,000 ft. [3,500 m], Dpto. Huila, Colombia, March 1976 (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, legs orange-yellow and gray; chelicerae dark orange; sternum black. Dorsum of abdomen with two longitudinal black bands (Fig. 425); venter black with curved longitudinal line of silver spots on each side; white spot on each side anterior of spinnerets. Anterior lateral eyes 1.2 diameters of anterior median eyes. Posterior median eyes 1.2 diameters of anterior medians, posterior laterals 1.1 diameters. Anterior median eyes slightly more than their diameter apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen narrow oval (Fig. 425). Total length, 4.8 mm. Carapace, 1.9 mm long, 1.3 mm wide. First femur, 2.5 mm; patella and tibia, 3.2 mm; metatarsus, 2.7 mm; tarsus, 1.0 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.8 mm.

Male. Coloration like female. Carapace with deep thoracic depression. Eyes sizes like female. Anterior median eyes their diameter apart, same distance from lat-

erals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen narrow oval. Total length, 4.5 mm. Carapace, 2.1 mm long, 1.7 mm wide. First femur, 3.4 mm; patella and tibia, 4.5 mm; metatarsus, 4.2 mm; tarsus, 1.2 mm. Second patella and tibia, 2.7 mm; third, 1.2 mm; fourth, 2.0 mm.

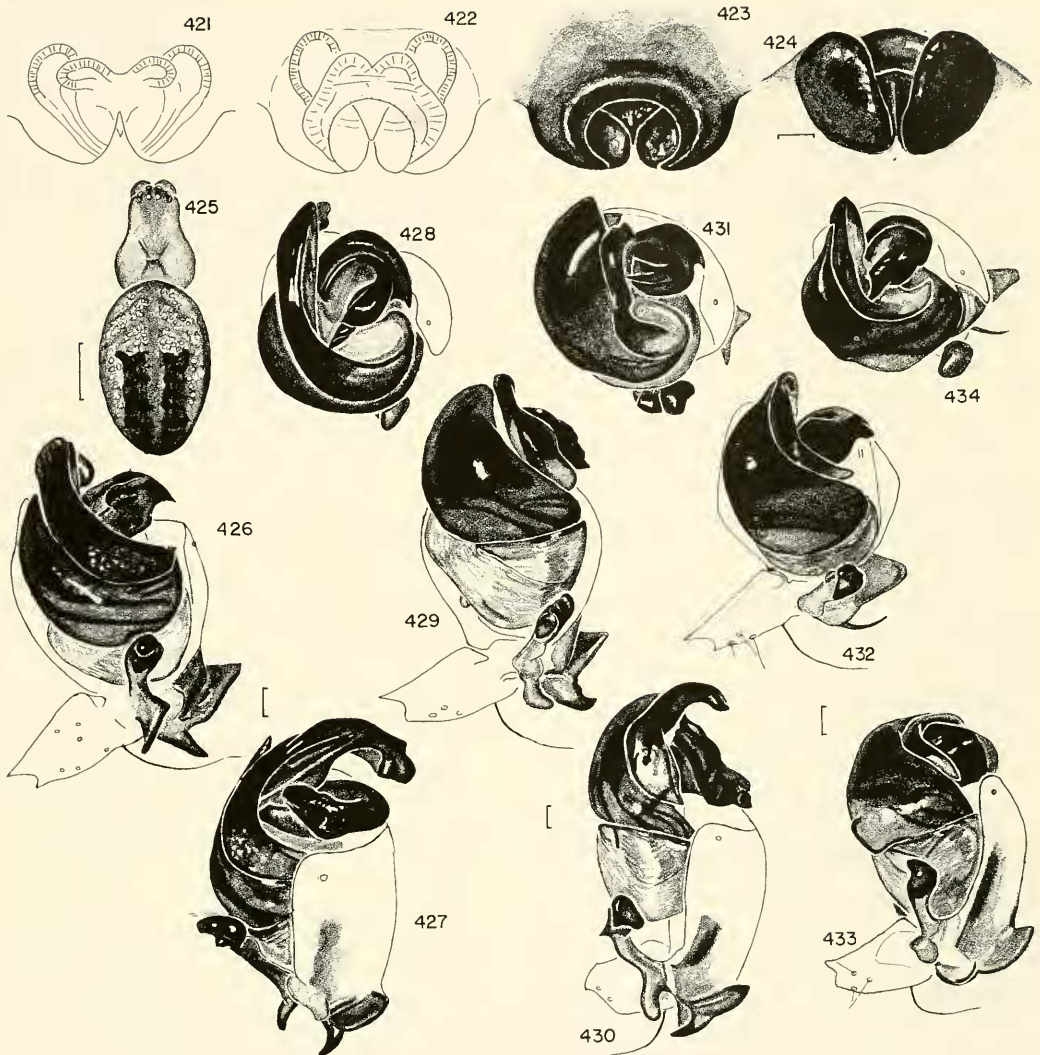
*Diagnosis.* The epigynum differs from that of *C. troya* by having the lip surrounding the depression entire (Fig. 423). The male palpus differs by the knobbed tip of the conductor and the shape of the embolus and terminal apophysis (Figs. 426–428).

*Chrysometa merida* new species  
Figures 429–431; Map 3

*Holotype.* Male from La Culata, 2,850 m, Est. Mérida, Venezuela, Feb. 1968 (J. Rivero, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Male. Carapace orange with pair of paraxial median longitudinal black lines separated by a light line; labium black; sternum black, orange in center; legs orange-gray. Dorsum of abdomen without silver spots, pair of indistinct gray anterior brackets, posteriorly a longitudinal dark band consisting of black transverse bars; venter gray with light longitudinal band on each side. Carapace with deep longitudinal thoracic groove. Eyes subequal in size. Anterior median eyes their diameter apart, slightly less than two diameters from laterals. Posterior median eyes their diameter apart, 1.8 diameters from laterals. Abdomen oval, elongate. Total length, 5.8 mm. Carapace, 2.7 mm long, 2.2 mm wide. First femur, 4.8 mm; patella and tibia, 5.7 mm; metatarsus, 5.9 mm; tarsus, 1.5 mm. Second patella and tibia, 3.7 mm; third, 1.7 mm; fourth, 2.7 mm.

*Diagnosis.* This male palpus differs from others of this species group by having a relatively small conductor like *C. chica* and by the shape of the embolus and terminal apophysis (Figs. 429–431).



Figures 421-428. *Chrysometa purace* n. sp. 421-424. Epigynum. 421. Dorsal, cleared. 422. Ventral, cleared. 423. Ventral. 424. Posterior. 425. Female. 426-428. Left male palpus. 426. Ventral. 427. Lateral. 428. Apical.

Figures 429-431. *C. merida* n. sp., male palpus. 429. Ventral. 430. Lateral. 431. Apical.

Figures 432-434. *C. huanuco* n. sp., male palpus. 432. Ventral. 433. Lateral. 434. Apical.

Scale lines. 0.1 mm, except Figure 425, 1.0 mm.

### *Chrysometa huanuco* new species Figures 432-434; Map 3

*Holotype*. Male from Huánuco, Dpto. Huánuco, Peru, 16 Sept. 1954 (E. I. Schlinger, E. S. Ross, CAS). The specific name is a noun in apposition after the type locality.

*Description*. Male. Carapace dusky orange with median light orange line; sternum black; legs orange with indistinct rings. Dorsum of abdomen with silver spots, posterior dark longitudinal band, and dark patches on shoulders. Venter

black with a silver longitudinal line on each side. Anterior lateral eyes equal to 1.3 diameters of anterior medians; posterior medians equal to 1.5 diameters; posterior laterals equal to diameter of anterior median eyes. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 1.8 diameters from laterals. Abdomen oval. Total length, 4.0 mm. Carapace, 1.9 mm long, 1.6 mm wide. First femur, 3.9 mm; patella and tibia, 4.8 mm; metatarsus, 4.7 mm; tarsus, 1.3 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.0 mm.

**Diagnosis.** The male palpus differs from those of *C. chica* and *C. merida*, which also have a small conductor, by the shape of the embolus and terminal apophysis (Figs. 432–434).

**Paratypes.** PERU *Dpto. Huánuco*: Sarapiampa, 3,600 m, 4♂ (F. Woytkowski, AMNH).

***Chrysometa minuta* (Keyserling),  
new combination**

**Figures 435–440; Map 3**

*Meta minuta* Keyserling, 1883: 206, pl. 15, fig. 10, ♀. Female from "Province Amazonas," Brazil (HEO), examined. Roewer, 1942: 919. Bonnet, 1957: 2795.

*Argyropeira minuta* Keyserling, 1893: 321, pl. 16, fig. 236, ♀.

**Description.** Female. Carapace, sternum, legs light orange. Dorsum of abdomen bleached orange-white [according to Keyserling, with fine white spots]. Anterior lateral eyes, posterior median eyes equal to 0.8 diameters of anterior medians; posterior lateral eyes equal to 0.6 diameters of anterior median eyes. Anterior median eyes 0.3 diameters apart, same distance from laterals. Posterior medians slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen subspherical. Total length, 3.5 mm. Carapace, 1.4 mm long, 1.1 mm wide. First femur, 1.9 mm; patella and tibia 1.5 mm. Second patella and tibia, 1.7 mm; third, 0.8 mm; fourth, 1.4 mm.

**Variation.** Recently collected specimens have scattered tiny white spots covering the abdomen and posteriorly on the abdomen paired, transverse, dusky marks (Fig. 440).

**Diagnosis.** The epigynum of this species differs from that of *C. aureola* by having the median septum posteriorly surrounded by lobes (Figs. 437, 438).

**Natural History, Distribution.** Found in low elevation forest of the Amazon area (Map 3).

**Records.** BRAZIL *Est. Amazonas*: Manaus, Aug. 1971, ♀ (M. E. Galiano, MG). *Mato Grosso*: Synoptic coll., 5♀ (M. Alvarenga, AMNH); 260 km N of Xavantina [12°49'S, 51°46'W], 400 m, gallery and dry forest, Feb.–April 1969, 2♀ (Xavantina-Cachimbo Exped., MCZ, MZSP).

***Chrysometa aureola* (Keyserling),  
new combination**

**Figures 441–446; Map 3**

*Zilla aureola* Keyserling, 1884: 652, pl. 21, fig. 4, ♀.

Two female paratypes in poor physical condition from le Para [Belém], Brazil in the MNHN, Paris, examined. Published locality: Pevas [Pebas, Peru]. Keyserling, 1893: 300, pl. 15, fig. 221, ♀.

*Araneus aureola*:—Petrunkévitch, 1911: 281.

*Zygiella aureola*:—Roewer, 1942: 886. Bonnet, 1959: 5001.

**Note.** The types had been marked *Meta aureola*, possibly by Simon.

**Description.** Female. Carapace, legs yellowish white; sternum yellow-brown. Dorsum and sides of abdomen with scattered white pigment spots evenly distributed. The spots were described by Keyserling (1884) as yellow. Anterior lateral eyes 0.7 diameters of anterior median eyes; posterior median and lateral eyes 0.8 diameters of anterior medians. Anterior median eyes slightly less than their diameter apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than one diameter from laterals. Abdomen subspherical. Total length, 3.2 mm. Carapace, 1.3 mm long, 0.9 mm wide. First femur, 1.7 mm; patella and tibia, 2.2 mm; metatarsus, 1.8 mm; tarsus, 0.7 mm. Second pa-



tella and tibia, 1.5 mm; third, 0.8 mm; fourth, 1.2 mm.

Male from Trinidad. Carapace orange, coloration otherwise like female. Lateral eyes equal to 0.6 diameters of anterior median eyes; posterior median eyes 0.7 diameters of anterior median eyes. Anterior median eyes 0.7 diameters apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, 1.2 diameters from laterals. Abdomen oval. Total length, 2.2 mm. Carapace, 1.2 mm long, 0.9 mm wide. First femur, 1.7 mm; patella and tibia, 2.0 mm; metatarsus, 1.7 mm; tarsus, 0.7 mm. Second patella and tibia, 1.5 mm; third, 0.7 mm; fourth, 1.0 mm.

**Variation.** Total length of females from 2.5 to 3.2 mm.

**Diagnosis.** The epigynum differs from that of *C. minuta* by having the septum touch the posterior margin of the epigynum in ventral view (Fig. 443) and from *C. xavantina* by the round lateral plates in posterior view. The male palpus differs from that of *C. xavantina* by the shape of the tips of conductor, embolus and terminal apophysis (Figs. 445, 446).

**Records.** TRINIDAD Piarco, 27 Nov. 1954, 2♀, ♂, 3–6 Jan. 1955, ♀ (A. M. Nadler, AMNH).

### *Chrysometa xavantina* new species Figures 447–453; Map 3

**Holotype.** Carapace, palpi and leg fragments of male holotype and abdomen of female paratype from 260 km N of Xavantina, 12°49'S, 51°46'W, 400 m el., Est. Mato Grosso, Brazil, Feb.–April 1969 (Xavantina–Cachimbo Exped., MZSP, ex MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Abdomen oval, covered by small white pigment spots.

Male. Carapace, sternum orange-brown, legs yellowish. Carapace with shallow thoracic depression. Secondary eyes 0.8 diameters of anterior medians. Anterior median eyes their diameter apart, 0.6 from laterals. Posterior median eyes slightly less than their diameter apart, their diameter from laterals. Clypeus height equal to 1.5

diameters of anterior median eyes. Carapace, 1.3 mm long, 1.0 mm wide. First femur, 2.2 mm. Third patella and tibia, 0.8 mm.

**Diagnosis.** The epigynum differs from that of *C. aureola* in having the posterior plates wider than long (Fig. 450) and the internal ducts wider (Figs. 447, 448). The male palpus differs from that of *C. aureola* by the shape of the tips of conductor and terminal apophysis and also by the paracymbium, which has a 90° angle in ventral view (Figs. 452, 453).

### *Chrysometa valle* new species Figures 454–458; Map 3

**Holotype.** Female from near Saladito, 1,600 m, Dpto. Valle, Colombia, Sept. 1975 (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange-yellow, head to thoracic depression brown. Sternum orange-yellow; legs ringed brown on orange-yellow. Dorsum of abdomen with black pattern and only scattered tiny silver spots (Fig. 458); venter black with narrow, pigmentless longitudinal line on each side containing some silver spots, and a pigmentless patch on each side anterior to pedicel. Eyes subequal in size. Anterior median eyes 0.6 diameters apart, 0.5 diameters from laterals. Posterior median eyes 0.6 diameters apart, their diameter from laterals. Abdomen oval, pointed behind. Total length, 4.0 mm. Carapace, 2.1 mm long, 1.5 mm wide. First femur, 2.9 mm; patella and tibia, 3.6 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 2.4 mm; third, 1.3 mm; fourth, 1.9 mm.

**Diagnosis.** The epigynum of this species can be separated from that of others by the circular septum and paired dark marks anterior and to the sides of the septum (Fig. 456).

### *Chrysometa antonio* new species Figures 459–462; Map 3

**Holotype.** Female from Río Donachui, 2,800 m, Sierra Nevada de Santa Marta, Colombia, 2 Jan. 1974

(J. A. Kochalka, MCZ). The specific name is a noun in apposition after one of the collecting localities.

**Description.** Female. Carapace orange-yellow with two gray paraxial bands; sternum, legs orange-yellow. Dorsum of abdomen with dark mark in middle, paired dark marks at posterior end; no white spots. Venter with black band, anterior half narrower than posterior. Secondary eyes equal to 1.2 diameters of anterior medians. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes 0.7 diameters apart, their diameter from laterals. Abdomen elongate oval. Total length, 5.0 mm. Carapace, 2.1 mm long, 1.6 mm wide. First femur, 3.5 mm; patella and tibia, 4.5 mm; metatarsus, 3.6 mm; tarsus, 1.3 mm. Second patella and tibia, 2.9 mm; third, 1.4 mm; fourth, 2.1 mm.

**Variation.** Two of the specimens have epigynum less sclerotized. In one specimen the anterior edge of the middle piece of the epigynum was not clearly set off.

**Diagnosis.** The epigynum of this species differs from that of *C. valle* by the shape of the median septum, constricted in the middle, and by the placement of the paired dark patches (Fig. 461).

**Natural History, Distribution.** Found 1,500 to 2,800 m elevation in northern Colombia (Map 3).

**Paratypes.** COLOMBIA *Dpto. Magdalena*, Sierra Nevada de Santa Marta: San Pedro, 1,500 m, 29 March 1975, ♀, 3 imm. (J. A. Kochalka, MCZ); Casa Antonio, Loma Cebolleta, 2,700 m, 8 May 1975, ♀, imm. (J. A. Kochalka).

### *Chrysometa nuevagranada* new species Figures 463–467; Map 3

**Holotype.** Female from Serra Nueva Granada, 1,570 m, Sierra Nevada de Santa Marta, Dpto. Magdalena, Colombia, 28 June 1975 (J. Kochalka, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace light orange; sternum orange; legs orange, distal ends of first tibiae black. Dorsum of abdomen without white spots, with indistinct gray shoulder patches, posteriorly with median longitudinal band consisting of transverse bars; venter with constricted black mark (Fig. 467). Eyes subequal in size. Anterior median eyes their diameter apart, slightly more than their diameter from laterals. Posterior median eyes their diameter apart, 1.3 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 2.0 mm long, 1.4 mm wide. First femur, 2.8 mm; patella and tibia, 3.5 mm; metatarsus, 2.8 mm; tarsus, 1.1 mm. Second patella and tibia, 2.3 mm; third, 1.1 mm; fourth, 1.8 mm.

**Diagnosis.** The epigynum of this species differs from that of *C. valle* and *C. antonio* by the subtriangular septum (Fig. 465).

### *Chrysometa sumare* new species Figures 468–471; Map 3

**Holotype.** Female from Teresópolis, 900–1,000 m, Est. Rio de Janeiro, Brazil, March 1946 (H. Sick, AMNH). The specific name is a noun in apposition after the locality.

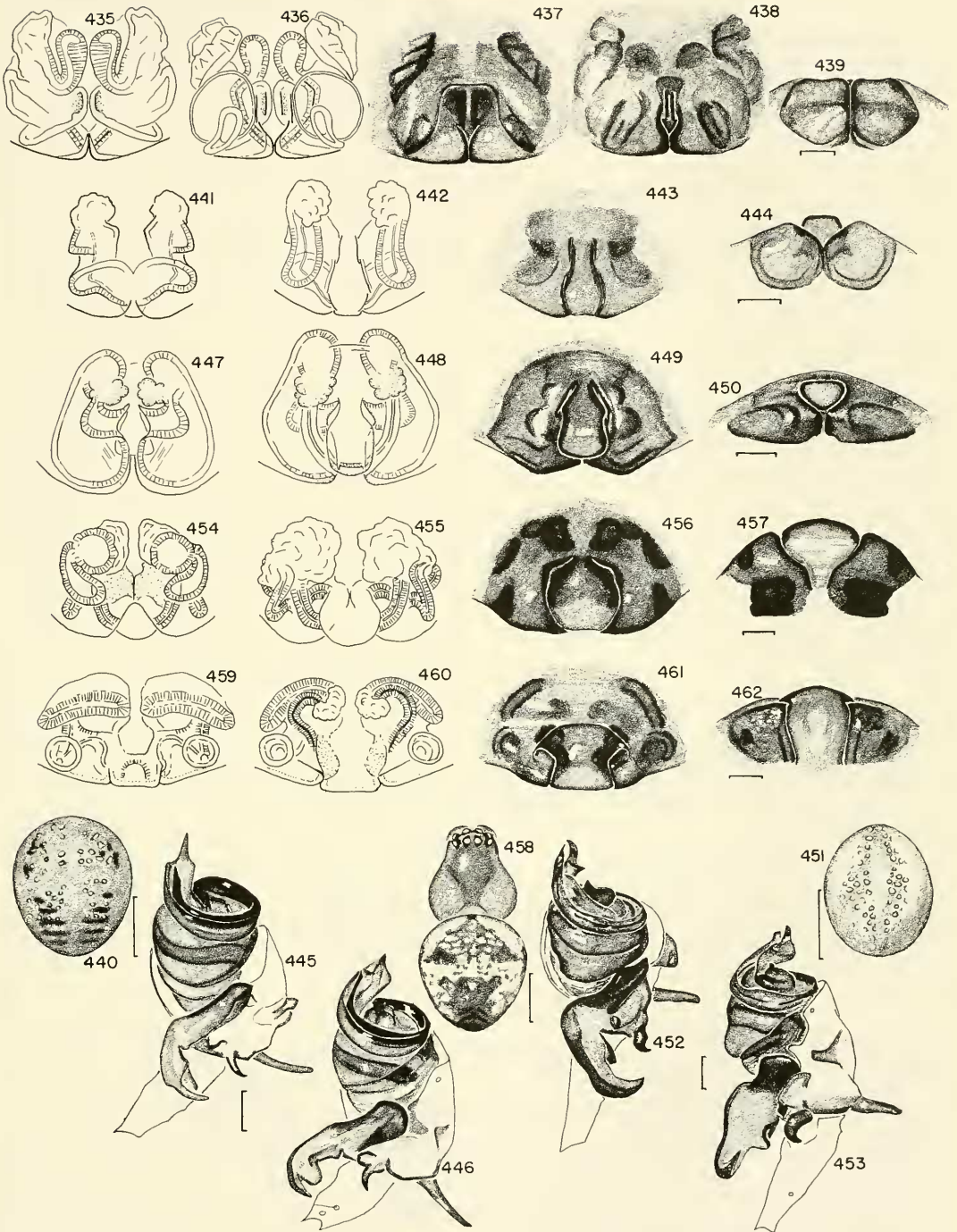
**Description.** Female. Carapace orange-yellow with narrow, darker median streak;

Figures 435–440. *Chrysometa minuta* (Keyserling). 435–439. Epigynum. 435. Dorsal, cleared. 436. Ventral, cleared. 437, 438. Ventral. 439. Posterior. 440. Female abdomen, dorsal. 435–437, 439. ("Amazonas"). 438, 440. (Mato Grosso).

Figures 441–446. *C. aureola* (Keyserling). 441–444. Epigynum. 441. Dorsal, cleared. 442. Ventral, cleared. 443. Ventral. 444. Posterior. 445, 446. Left male palpus. 445. Ventral. 446. Lateral.

Figures 447–453. *C. xavantina* n. sp. 447–450. Epigynum. 447. Dorsal, cleared. 448. Ventral, cleared. 449. Ventral. 450. Posterior. 451. Female abdomen, dorsal. 452, 453. Male palpus. 452. Ventral. 453. Lateral.

Figures 454–458. *C. valle* n. sp. 454–457. Epigynum. 454. Dorsal, cleared. 455. Ventral, cleared. 456. Ventral. 457. Posterior. 458. Female.



Figures 459-462. *C. antonio* n. sp., epigynum. 459. Dorsal, cleared. 460. Ventral, cleared. 461. Ventral. 462. Posterior. Scale lines. 0.1 mm, except Figures 440, 451, 458, 1.0 mm.



sternum orange; legs orange with dusky rings. Dorsum of abdomen with scattered white spots, posterior with transverse black bars forming wide longitudinal band, black patches on shoulders; sides with scattered white spots, black patch anteriorly; venter with rectangular black area anteriorly, no white lines. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, 0.6 diameters from laterals. Posterior median eyes 0.6 diameters apart, their diameter from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 2.0 mm long, 1.6 mm wide. First femur, 2.7 mm; patella and tibia, 3.2 mm; metatarsus, 2.5 mm; tarsus, 0.9 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.8 mm.

*Variation.* Total length 4.1 to 4.5 mm.

*Diagnosis.* The epigynum of *C. sumare* differs from others by the long, narrow transverse bar and septum (Fig. 470) and from *C. chulumani* and *C. sevilano* by longer ducts (Figs. 468, 469).

*Natural History, Distribution.* Found at low elevations, southeastern Brazil (Map 3).

*Paratypes.* BRAZIL *Est. Rio de Janeiro:* Sumaré, Rio de Janeiro, Feb. 1946, ♀ (H. Sick, AMNH). *São Paulo:* Mata do Governor, Inst. Botânica, 4 March 1959, ♀ (F. Lane, AMNH).

### *Chrysometa niebla* new species

Figures 472–476, Map 3

*Holotype.* Female from Saladito, above Cali, 1,800 m, fog forest, Dpto. Valle, Colombia, 3 Jan. 1977

(H. Levi, MCZ). The specific name is a noun in apposition after *niebla*, Spanish for fog.

*Description.* Female. Carapace orange, head darker; sternum orange; legs orange, indistinctly ringed. Dorsum of abdomen with black transverse marks and few small scattered silver spots (Fig. 476); sides gray; venter black and orange-gray. Eyes subequal in size. Anterior median eyes 0.5 diameters apart, same distance from laterals. Posterior median eyes 0.5 diameters apart, 0.8 diameters from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 2.0 mm long, 1.5 mm wide. First femur, 2.7 mm; patella and tibia, 3.4 mm; metatarsus, 2.5 mm; tarsus, 1.1 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.8 mm.

*Diagnosis.* The rectangular septum and bar of the epigynum and the surrounding pairs of dark patches distinguish this species from *C. valle* and *C. antonio* (Fig. 474).

### *Chrysometa buga* new species

Figures 477–481; Map 3

*Holotype.* Female from Lago Colima between Buga and Lobguerrero, Dpto. Valle, Colombia, Sept. 1973 (W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, sternum orange-yellow; legs with black rings on distal ends of tibiae. Dorsum of abdomen with tiny silver spots (Fig. 481); some gray on midline of venter. Anterior lateral eyes, posterior median eyes equal to 1.3

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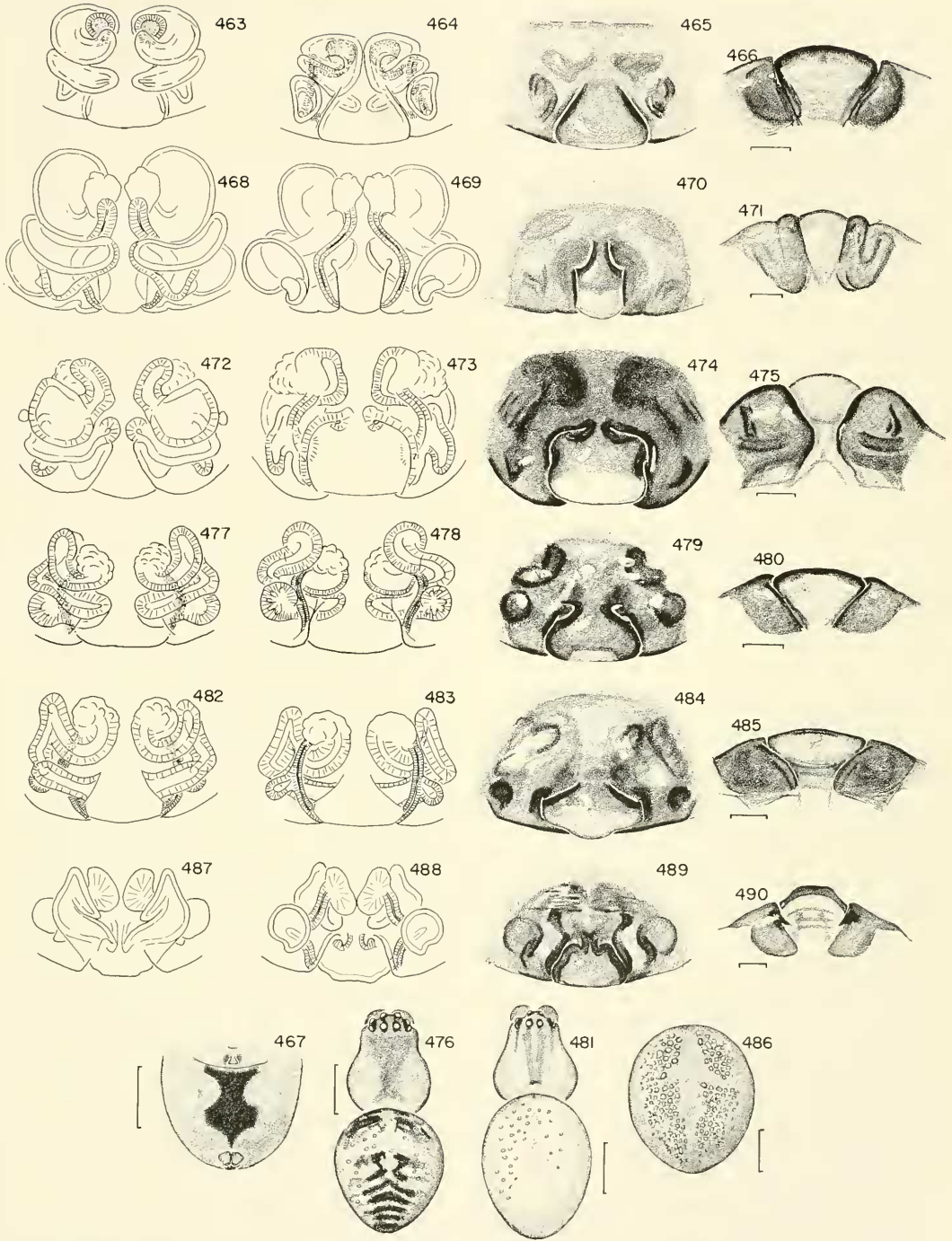
Figures 463–467. *Chrysometa nuevagranada* n. sp. 463–466. Epigynum. 463. Dorsal, cleared. 464. Ventral, cleared. 465. Ventral. 466. Posterior. 467. Female abdomen, ventral.

Figures 468–471. *C. sumare* n. sp., epigynum. 468. Dorsal, cleared. 469. Ventral, cleared. 470. Ventral. 471. Posterior.

Figures 472–476. *C. niebla* n. sp. 472–475. Epigynum. 472. Dorsal, cleared. 473. Ventral, cleared. 474. Ventral. 475. Posterior. 476. Female.

Figures 477–481. *C. buga* n. sp. 477–480. Epigynum. 477. Dorsal, cleared. 478. Ventral, cleared. 479. Ventral. 480. Posterior. 481. Female.

Figures 482–486. *C. rubromaculata* (Keyserling). 482–485. Epigynum. 482. Dorsal, cleared. 483. Ventral, cleared. 484. Ventral. 485. Posterior. 486. Female abdomen, dorsal.



Figures 487-490. *C. rincon* n. sp., epigynum. 487. Dorsal, cleared. 488. Ventral, cleared. 489. Ventral. 490. Posterior. Scale lines. 0.1 mm, except Figures 467, 476, 481, 486, 1.0 mm.

diameters of anterior median eyes; posterior lateral eyes equal to diameter of anterior median eyes. Anterior median eyes their diameter apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 3.0 mm; patella and tibia, 3.6 mm; metatarsus, 3.2 mm; tarsus, 1.2 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.8 mm.

*Variation.* Females vary in total length from 4.0 to 4.5 mm.

*Diagnosis.* The wide septum, oval transverse bar and the position of the paired dark patches of the epigynum separate this species from *C. niebla* and *C. valle* (Fig. 479).

*Paratypes.* COLOMBIA *Dpto. Magdalena*, Sierra Nevada de Santa Marta: Serra Nueva Granada, 1,620 m, 7 April 1975, ♀; 1,570 m, 28 April 1975, ♀ (J. Kochalka, MCZ). *Valle*: above Saladito, 1,800 m, ♀ (W. Eberhard, no. 965, MCZ).

### *Chrysometa rubromaculata* (Keyserling) Figures 482–486

*Tetragnatha rubromaculata* Keyserling, 1863: 150, pl. 7, figs. 15, 16, ♀. Female lectotype here designated from New Granada [Spanish colony of Colombia and Panama], (BMNH), examined.

*Argyropeira rubromaculata*:—Keyserling, 1893: 332, pl. 17, figs. 245, 245c (not 245b, d, e).

*Chrysometa rubromaculata*:—Roewer, 1942: 913. Bonnet, 1956: 1083.

*Note.* The type of this species had been lost. Keyserling reports on two females. A female and male of a similar species marked *A. rubromaculata* were found by Paul Hillyard in the BMNH collections; the female a new species here named *C. keyserlingi* (Keyserling, 1893, fig. 245b), the male *C. alboguttata* (Keyserling, 1893, fig. 245 c, d). The two lost females were in a vial marked *Meta granadensis* Keyserling [nomen nudum], in the Keyserling collection. One of these was used for Keyserling's 1863 figs. 15, 16 and 1893 fig.

245c; the other was another species of *Chrysometa*.

*Description.* Female. Carapace, sternum, legs yellow. Dorsum of abdomen covered with silver spots (Fig. 486); venter with silver spots on sides and a black band from epigynum to spinnerets, slightly constricted anteriorly. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.6 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 5.7 mm. Carapace, 2.1 mm long, 1.7 mm wide. Third patella and tibia, 1.5 mm; fourth, 2.1 mm.

*Diagnosis.* The diagonal sclerotized anterior border of the transverse bar of the epigynum distinguishes this species (Fig. 484) from others having a short septum.

### *Chrysometa rincon* new species Figures 487–490; Map 3

*Holotype.* Female from Rincon, Chiapas, Mexico, 6 April 1953 (L. I. Davis, AMNH). The name is a noun in apposition after the type locality.

*Description.* Female. Carapace light orange with two dusky paraxial bands from posterior median eyes; sternum orange; legs orange with black spots and ringed. Dorsum of abdomen with silver spots and paired dusky patches in two posteriorly converging lines; venter with black band widest in middle and silver spots on each side. Secondary eyes equal to 1.3 diameters of anterior median eyes. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, slightly more than their diameter from laterals. Abdomen oval. Total length, 5.0 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 3.0 mm; patella and tibia, 3.8 mm; metatarsus, 3.0 mm; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.1 mm; fourth, 1.8 mm.

*Diagnosis.* The trapezoidal transverse bar having a small anterior lobe on each side of the septum of the epigynum (Fig.



489) distinguishes this species from *C. jelskii* and others.

***Chrysometa ludibunda* (Keyserling),  
new combination**

Figures 491–496; Map 4

*Argyropeira ludibunda* Keyserling, 1893: 352, pl. 18, fig. 260, ♀, ♂. Female lectotype from Monte Verde [Est. Rio de Janeiro], male paralectotype from Cerra Vermelho [Est. Rio de Janeiro], Brazil (BMNH), examined.

*Meta ludibunda*:—Roewer, 1942: 919. Bonnet, 1957: 2787.

**Description.** Female. Carapace yellow; sternum with black pigment; legs yellow with indistinct darker marks. Dorsum of abdomen with paired white and gray patches; venter with wide longitudinal black band, light anterior, dark posterior, no white marks. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes equal to 0.9 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, same distance from laterals. Abdomen oval. Total length, 3.8 mm. Carapace, 1.7 mm long, 1.3 mm wide. First femur, 2.4 mm; patella and tibia, 2.7 mm; metatarsus, 2.3 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 1.0 mm; fourth, 1.7 mm.

Male. Coloration like female. Head reddish brown, otherwise yellow. Dorsum of abdomen with seven pairs of white spots, dark spot anteriorly on sides, posteriorly with pair of gray patches. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, 0.6 diameters from laterals. Posterior median eyes slightly less than their diameter apart, same distance from laterals. Total length, 3.0 mm. Carapace, 1.5 mm long, 1.3 mm wide. First femur, 3.1 mm; patella and tibia, 3.7 mm; metatarsus, 3.2 mm; tarsus, 0.5 mm. Second patella and tibia, 2.4 mm; third, 1.0 mm; fourth, 1.6 mm.

**Variation.** Recently collected specimens have smaller eyes. This is perhaps

due to the presence of dark pigment which is faded in the old Keyserling specimens. Some specimens have black pigment on the abdomen.

**Diagnosis.** The wide flat transverse bar of the epigynum containing the shadows of a pair of dark triangles (Fig. 493) distinguishes females. Males have a wider tegulum of the palpus than *C. unicolor*, a shorter palpal tibia and a longer “lower” prong of the paracymbium (Figs. 495, 496).

**Records.** BRAZIL. *Est. Rio de Janeiro*: Teresópolis, 900–1,000 m, March 1946, ♀, imm. (H. Sick, AMNH); Paineiras, Rio de Janeiro, 22 Jan. 1959, ♂ (A. M. Nadler, AMNH). *São Paulo*: Boracéia, 12 Jan. 1961, ♂, 27 Feb. 1967, ♀ (P. Biasi, MZSP).

***Chrysometa jelskii* new species  
Figures 497–500; Map 4**

**Holotype.** Female from Monterico, Dpto. Ayacucho [ca. 12°28'S, 73°54'W], Peru, (K. Jelski, PAN). The species is named after the collector.

**Description.** Female. Carapace orange with indistinct darker areas and light orange median line; sternum orange; legs orange with indistinct rings. Dorsum and sides of abdomen with silver spots, more than their diameter apart, dark longitudinal band of transverse bars, widest anteriorly. Venter with black band, few silver spots on sides. Eyes subequal in size. Anterior median eyes 0.6 diameters apart, their diameter from laterals. Posterior median eyes 0.7 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 5.5 mm. Carapace, 2.0 mm long, 1.5 mm wide. First femur, 2.8 mm; patella and tibia, 3.3 mm; metatarsus, 3.0 mm; tarsus, 1.1 mm. Second patella and tibia, 2.3 mm; third, 1.2 mm; fourth, 1.9 mm.

**Diagnosis.** The transverse bar having a slight notch on each side of the short, wide septum (Fig. 499) distinguishes the epigynum of this species from those of *C. rincon* and *C. decolorata*.

*Chrysometa decolorata* (O. P.-Cambridge),  
new combination

Figures 501–505; Map 4

*Meta decolorata* O. P.-Cambridge, 1889: 3, pl. 1, fig. 4, ♀. Female holotype from Guatemala (BMNH), examined.*Pseudometa decolorata*:—F. P.-Cambridge, 1903: 446, pl. 42, fig. 22, ♀. Roewer, 1942: 922. Bonnet, 1958: 3817.

**Description.** Female. Carapace orange-yellow. Sternum, legs with some gray pigment. Dorsum of abdomen with silver spots; venter with two longitudinal lines of silver spots (Fig. 505). Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 diameters from laterals. Abdomen oval. Total length of holotype, 5.9 mm. Carapace, 2.9 mm long, 2.2 mm wide. First femur, 3.2 mm; patella and tibia, 4.0 mm; metatarsus, 3.1 mm; tarsus, 1.3 mm. Second patella and tibia, 3.2 mm; third, 1.6 mm; fourth, 2.7 mm.

**Note.** Figures 501–505 were made from a recently collected female.

**Variation.** The recently collected females have slightly longer legs, total length 5.6 mm, carapace 2.4 mm long, 1.8 mm wide, first patella and tibia 4.7 mm.

**Diagnosis.** The oval transverse bar and indistinct septum of the epigynum (Fig. 503) distinguish this species from related ones.

**Record.** GUATEMALA Dpto. Baja

Verapaz: Purulhá, 2,300 m, 22–23 April 1979, 3♀ (J. Coddington, MCZ, USNM).

*Chrysometa unicolor* (Keyserling),  
new combination

Figures 506, 507

*Meta unicolor* Keyserling, 1880: 566, pl. 16, fig. 15, ♂. Male holotype from New Granada (Spanish colony of Colombia and Panama) (BMNH), examined. Roewer, 1942: 920. Bonnet, 1957: 2805.

*Argyropeira unicolor*:—Keyserling, 1893: 349, pl. 18, fig. 257, ♂.

**Note.** The holotype has only a left palpus; it is in poor condition, having been glued to a pinpoint at one time.

**Description.** Male. Carapace, sternum, legs orange-yellow. Dorsum of abdomen covered by silver spots. Eyes subequal in size. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes 1.2 diameters apart, 1.5 diameters from laterals. Abdomen oval. Total length, 3.1 mm. Carapace, 1.5 mm long, 1.2 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm. Second patella and tibia, 2.1 mm; third, 0.9 mm; fourth, 1.5 mm.

**Diagnosis.** The male palpus of this species has a narrower tegulum, a longer tibia and a different proximal end of the paracymbium (Figs. 506, 507) than *C. ludibunda*.

*Chrysometa craigae* new species

Figures 508–514; Map 4

**Holotype.** Male from Bosque Nuboso, Monteverde Cloud Forest Reserve, 1,580 m el., 25 Feb. 1977,

Figures 491–496. *Chrysometa ludibunda* (Keyserling). 491–494. Epigynum. 491. Dorsal, cleared. 492. Ventral, cleared. 493. Ventral. 494. Posterior. 495, 496. Left male palpus. 495. Ventral. 496. Lateral.

Figures 497–500. *C. jelskii* n. sp., epigynum. 497. Dorsal, cleared. 498. Ventral, cleared. 499. Ventral. 500. Posterior.

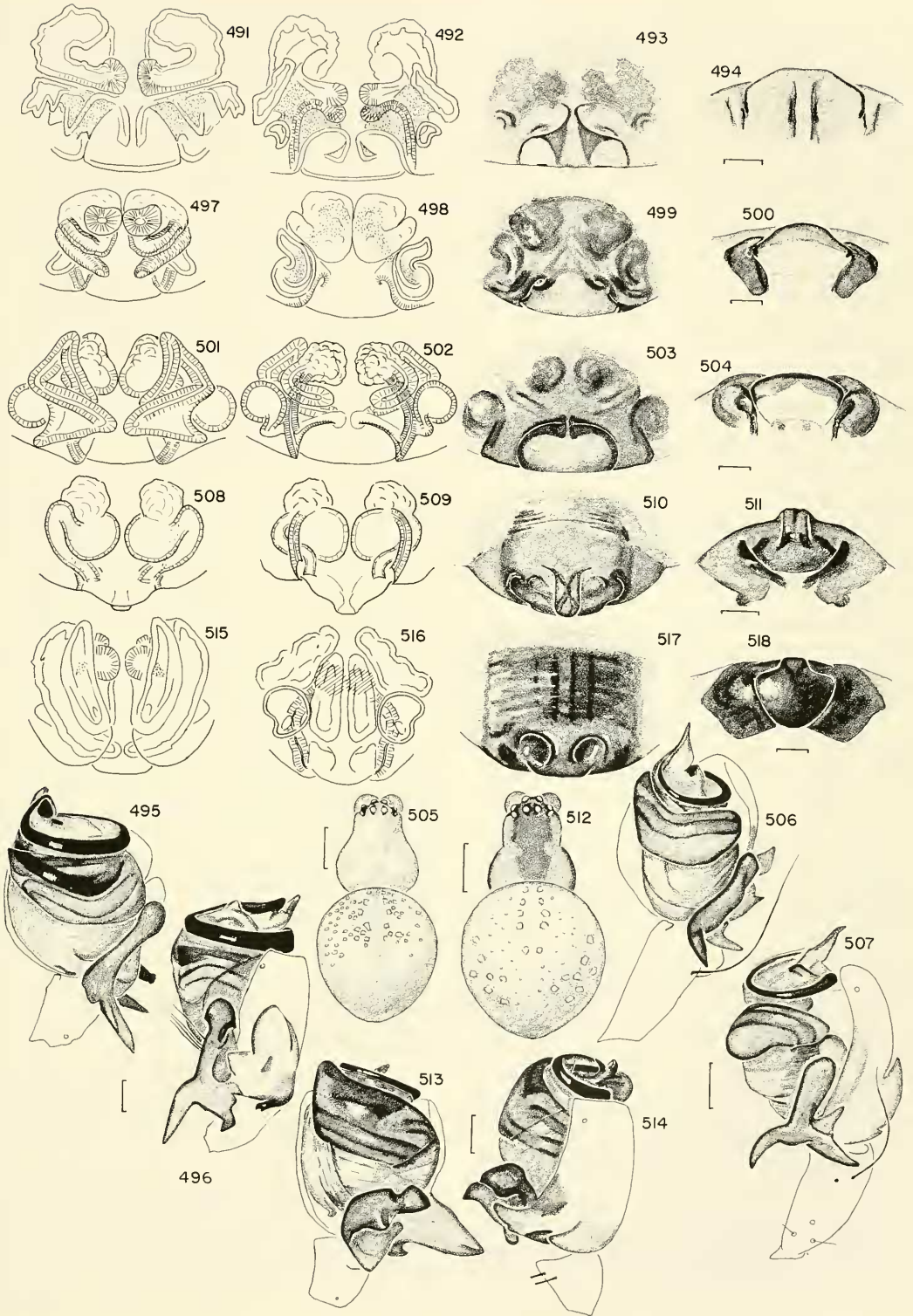
Figures 501–505. *C. decolorata* (O. P.-Cambridge). 501–504. Epigynum. 501. Dorsal, cleared. 502. Ventral, cleared. 503. Ventral. 504. Posterior. 505. Female.

Figures 506, 507. *C. unicolor* (Keyserling), male palpus. 506. Ventral. 507. Lateral.

Figures 508–514. *C. craigae* n. sp. 508–511. Epigynum. 508. Dorsal, cleared. 509. Ventral, cleared. 510. Ventral. 511. Posterior. 512. Female. 513, 514. Male palpus. 513. Ventral. 514. Lateral.

Figures 515–518. *C. machala* n. sp., epigynum. 515. Dorsal, cleared. 516. Ventral, cleared. 517. Ventral. 518. Posterior.

**Scale lines.** 0.1, except Figures 505, 512, 1.0 mm.





Prov. Puntarenas, Costa Rica (C. L. Craig, MCZ). The species is named after ecologist and collector Cay Craig.

**Description.** Female. Carapace orange-yellow, head orange; sternum yellow; legs yellow, indistinctly ringed. Dorsum of abdomen with scattered silver spots and two bands of gray marks (Fig. 512); venter with scattered silver spots. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.7 diameters apart, 1.2 diameters from laterals. Abdomen oval, evenly rounded. Total length, 4.8 mm. Carapace, 2.4 mm long, 1.7 mm wide. First femur, 3.0 mm; patella and tibia, 3.5 mm; metatarsus, 2.8 mm; tarsus, 1.2 mm. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth 2.2 mm.

Male. Color markings like female. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, 0.5 from laterals. Posterior median eyes 0.5 diameters apart, 0.8 from laterals. Total length, 3.0 mm. Carapace, 1.4 mm long, 1.2 mm wide. First femur, 2.7 mm; patella and tibia, 3.6 mm; metatarsus, 2.9 mm; tarsus, 1.2 mm. Second patella and tibia, 2.2 mm; third, 1.1 mm; fourth 1.4 mm.

**Variation.** Females vary in total length from 4.7 to 5.6 mm, males from 3.0 to 4.0 mm.

**Diagnosis.** The epigynum of this species differs from all others by a median septum above the transverse bar; the bar has a lateral pocket on each side (Figs. 510, 511). On the sides are paraxial dark marks (Fig. 510). The male palpus can be separated from that of other species by the triangular curved projection of the cymbium and the shape of the paracymbium (Figs. 513, 514).

**Natural History, Distribution.** From forest, 1,500 m, Costa Rica (Map 4).

**Paratypes.** COSTA RICA *Prov. Puntarenas:* Bosque Pantanosa, Monteverde Cloud Forest, 1,600 m, 23 May 1977, 7 July 1955, 2♂, July 1978, 4♀ (C. L. Craig, P. Klass, MCZ); Bosque del Río, Monteverde Cloud Forest, 24 May 1977, ♂, 4

Aug. 1977, ♀ (C. L. Craig, MCZ); Monteverde Comm. Grindon prop., Powell house, July 1978, ♂ (C. L. Craig, P. Klass, MCZ); swamp forest, Aug. 1977, 4♀ (C. L. Craig, MCZ); Cloud Forest, Monteverde, 1,500 m, 13 July 1980, ♀ (J. Coddington, USNM). *Alajuela:* headwaters of Río Peñas Blancas, 13 July 1980, ♀ (J. Coddington, MCZ). *?San José:* La Palma, ♀ (J. F. Tristana, MCZ). *Cartago:* Tuis, hilltops, 1 June 1979, ♀ (J. Coddington, MCZ).

### *Chrysometa machala* new species Figures 515–518; Map 4

**Holotype.** Female from Buenavista, 20 km SE of Machala, Prov. El Oro, Ecuador, 11 Jan. 1943 (E. L. Moore, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female in poor, shriveled condition. Dorsum of abdomen covered with silver spots; venter with median dark band constricted anteriorly by a pair of light patches of silver spots. Total length, 3.0 mm. Carapace, 1.4 mm long. First femur, 2.3 mm; patella and tibia, 2.9 mm; metatarsus, 2.1 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 2.0 mm.

**Note.** In the Keyserling collection (BMNH) is a specimen of this species from Peru; it had been marked *C. opulenta*.

**Diagnosis.** The short transverse bar and the depressions on each side of the septum, each depression surrounded by a circular lip (Fig. 517), as well as the bulge of the bar in posterior view (Fig. 518) of the epigynum, distinguish this species from *C. itaimba*.

### *Chrysometa itaimba* new species Figures 519–522; Map 4

**Holotype.** Female from Itaimbézinho, Camará do Sul, Est. Rio Grande do Sul, Brazil, 5 Jan. 1985 (A. Lise, MCN no. 12796). The name is an arbitrary combination of letters.

**Description.** Female. Carapace yellowish with black patch behind posterior median eyes, widening behind head, and coming to point on thorax; chelicerae dark brown; labium, endites blackish brown;

sternum orange; legs yellowish with distinct black rings. Dorsum of abdomen with tiny scattered silver spots, some black marks anteriorly, posterior half with median black band broken in middle; sides with tiny silver spots; venter with rectangular black patch, longer than wide. Anterior lateral eyes equal to diameter of anterior medians; posterior median eyes equal to 0.9 diameters; posterior lateral eyes equal to 0.8 diameters of anterior median eyes. Anterior median eyes 0.6 diameters apart, 0.5 diameters from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen spherical. Total length, 5.0 mm. Carapace, 2.2 mm long, 1.7 mm wide. First femur, 3.1 mm; patella and tibia, 3.7 mm; metatarsus, 2.9 mm; tarsus, 1.1 mm. Second patella and tibia, 2.6 mm; third, 1.2 mm; fourth, 1.9 mm.

**Diagnosis.** The shape of the septum and transverse bar and the comma-shaped depressions on each side of the septum of the epigynum (Fig. 521) distinguish this species from *C. machala*.

**Natural History, Distribution.** Found at low elevations, southeastern Brazil (Map 4).

**Paratype.** BRAZIL *Est. São Paulo*: Campos do Jordão, 3 Jan. 1948, ♀ (F. Lane, MZSP).

***Chrysometa nigrovittata* Keyserling, new combination**

Figures 523–529; Map 4

*Meta nigrovittata* Keyserling, 1865: 833, pl. 20, figs. 1–3, ♂. Male holotype from New Granada [Spanish colony of Colombia and Panama] (BMNH), examined. Roewer, 1942: 919. Bonnet, 1957: 2796.

**Note.** A juvenile female is with type male in the vial.

**Description.** Female. Carapace, legs orange-yellow; sternum orange, sides gray. Dorsum of abdomen with large silver spots, posterior with median dark band (Fig. 527); sides with silver spots; sides of venter with longitudinal lines containing small silver spots, ending in a large silver

spot some distance in front of spinnerets. Lateral eyes equal to 1.3 diameters of anterior medians; posterior median eyes equal to 1.4 diameters of anterior medians. Anterior median eyes slightly more than their diameter apart, 1.5 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.5 diameters from laterals. Abdomen oval. Total length, 6.0 mm. Carapace, 2.2 mm long, 1.8 mm wide. First femur, 3.2 mm; patella and tibia, 4.2 mm; metatarsus, 3.4 mm; tarsus, 1.4 mm. Second patella and tibia, 2.7 mm; third, 1.4 mm; fourth, 2.2 mm.

Male holotype. Carapace yellow-white; darker streaks from thoracic grooves to posterior median eyes and to sides of eyes. Chelicerae brown. Sternum yellow. Legs yellow with indistinct darker patches. Dorsum of abdomen with three pairs of silver patches on anterior, and on each side a longitudinal silver band, posteriorly transverse black marks; venter black with a pair of silver patches, indistinct silver lines of tiny dots. Secondary eyes 1.2 diameters of anterior medians. Anterior median eyes slightly more than their diameter apart, 1.4 from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 from laterals. Abdomen suboval. Total length, 4.7 mm. Carapace, 2.3 mm long, 1.9 mm wide. First femur, 6.5 mm; patella and tibia, 6.5 mm; metatarsus, 5.2 mm; tarsus, 1.8 mm. Second patella and tibia, 3.5 mm; third, 1.7 mm; fourth, 2.6 mm.

**Variation.** Females vary in total length from 5.5 to 6.0 mm, males from 4.7 to 5.2 mm.

**Diagnosis.** The lobes on the anterior margin of the square transverse bar of the epigynum (Fig. 525) distinguish females from *C. itaimba*. The shape of the paracymbium (Figs. 528, 529) distinguishes males.

**Natural History, Distribution.** 2,900 to 3,100 m, southern Colombia, Ecuador.

**Records.** COLOMBIA *Dpto. Cauca*: Puracé Natl. Park, path from Cascada San

Nicolas, 2,900 m, 16 Jan. 1983, ♂ (J. Korchalka, MCZ). ECUADOR *Prov. Azuay*: Cerro Tinajillas, 3,100 m, 18–21 March 1965, 10♀, 3♂ (L. Peña, MCZ); 8 km E of Sevilla de Oro, 17 Feb. 1955, ♀ (E. I. Schlinger, E. S. Ross, CAS).

*Chrysometa flava* (O. P.-Cambridge),  
new combination

Figures 530–536; Map 4

*Meta flava* O. P.-Cambridge, 1894: 135, pl. 18, fig. 8, ♂. Male holotype from Teapa, Tabasco, Mexico (BMNH), examined.

*Pseudometa flava*:—F. P.-Cambridge, 1903: 445, pl. 42, fig. 17, ♂. Roewer, 1942: 922. Bonnet, 1958: 3817.

**Description.** Female. Carapace, sternum, legs orange-yellow, distal ends of tibiae black. Abdomen with silver spots (Fig. 534), black on venter and on sides of spinnerets, with dark area extending halfway from posterior end to epigynum. Eyes subequal in size except posterior laterals, 0.8 diameters of anterior medians. Anterior median eyes their diameter apart, 1.2 diameters from laterals. Posterior median eyes 0.9 diameters apart, 1.2 diameters from laterals. Total length, 5.7 mm. Carapace, 2.9 mm long, 2.1 mm wide. First femur, 3.7 mm; patella and tibia, 4.4 mm; metatarsus, 3.5 mm; tarsus, 1.4 mm. Second patella and tibia, 3.7 mm; third, 1.7 mm; fourth, 2.9 mm.

Male. Coloration, eyes similar to female. Total length, 4.4 mm. Carapace, 2.3

mm long, 1.9 mm wide. First femur, 4.2 mm; patella and tibia, 4.9 mm; metatarsus, 4.3 mm; tarsus, 1.3 mm. Second patella and tibia, 3.8 mm; third, 1.5 mm; fourth, 2.7 mm.

**Variation.** Total length of females varies from 4.5 mm (Manaus) to 6.1 mm, males from 3.9 to 4.9 mm.

**Diagnosis.** *Chrysometa flava* has longer legs than the sympatric *C. heredia*. The oval transverse bar and notched anterior rim of the opening on each side of the narrow septum of the epigynum (Fig. 532) distinguish females; the paracymbium of the palpus having an “up” facing lateral hook (Figs. 535, 536) distinguishes males.

**Natural History, Distribution.** Found in low elevation forest from southern Mexico to the Amazon.

**Records.** COSTA RICA *Prov. Heredia*: La Selva near Puerto Viejo, very common, ♀♀, ♂♂ (AMNH, MCZ, MZCR). *Cartago*: Turrialba, 15 Aug. 1963, ♀ (W. Peck, EPC). BRAZIL *Est. Amazonas*: Res. Ducke, Manaus, Aug. 1971, ♀ (M. E. Galiano, MG).

*Chrysometa buenaventura* new species  
Figures 537–541; Map 4

**Holotype.** Female from 28 km east of Buenaventura, 50 m el., Dpto. Valle, Colombia, 1977 (W. Eberhard, MCZ). The specific name is a noun in apposition after the locality.

**Description.** Female. Carapace yellowish with brown pattern, chelicerae brown

Figures 519–522. *Chrysometa itaimba* n. sp., epigynum. 519. Dorsal, cleared. 520. Ventral, cleared. 521. Ventral. 522. Posterior.

Figures 523–529. *C. nigrovittata* (Keyserling). 523–526. Epigynum. 523. Dorsal, cleared. 524. Ventral, cleared. 525. Ventral. 526. Posterior. 527. Female. 528, 529. Left male palpus. 528. Ventral. 529. Lateral.

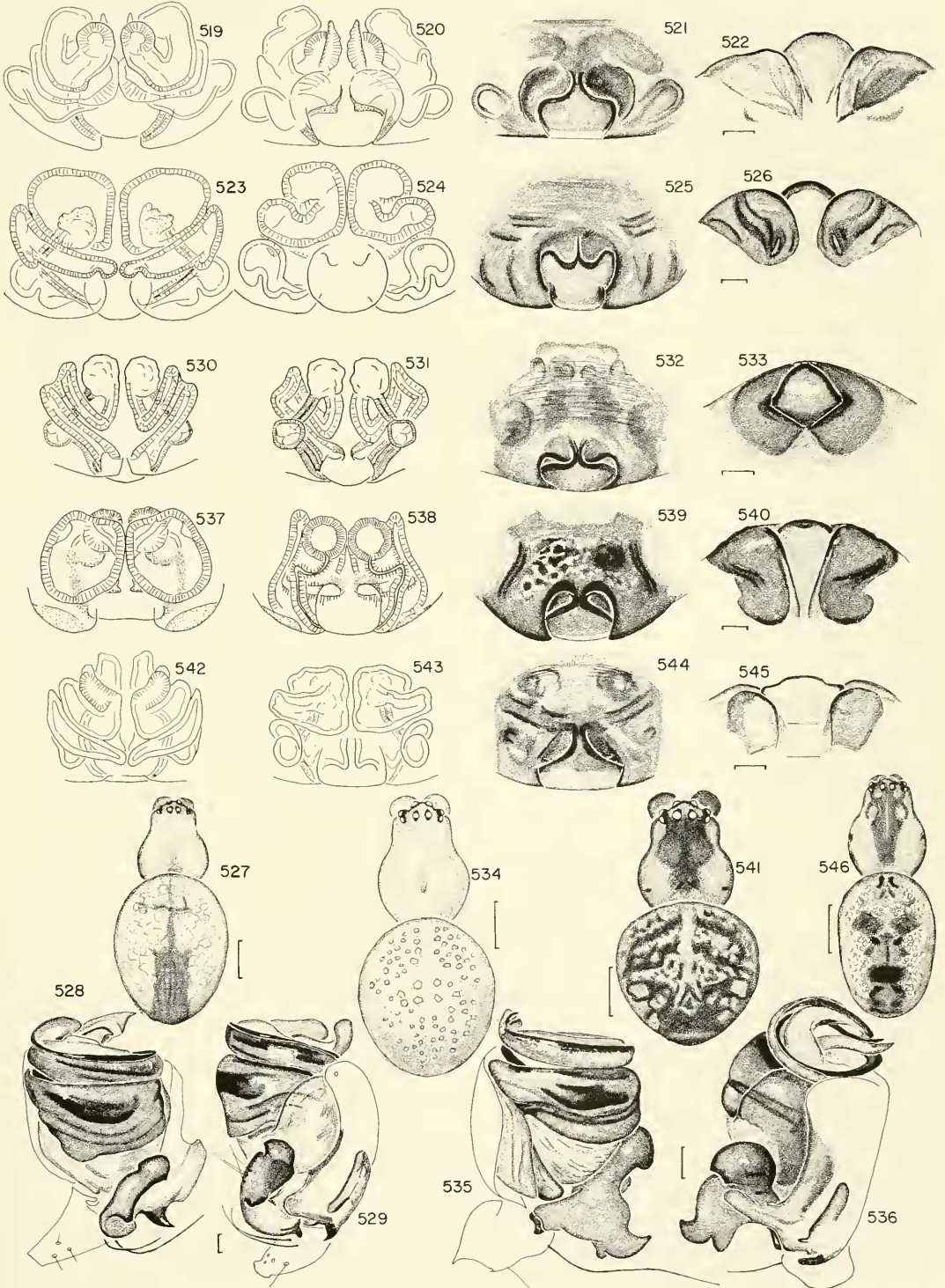
Figures 530–536. *C. flava* (O. P.-Cambridge). 530–533. Epigynum. 530. Dorsal, cleared. 531. Ventral, cleared. 532. Ventral. 533. Posterior. 534. Female. 535, 536. Male palpus. 535. Ventral. 536. Lateral.

Figures 537–541. *C. buenaventura* n. sp. 537–540. Epigynum. 537. Dorsal, cleared. 538. Ventral, cleared. 539. Ventral. 540. Posterior. 541. Female.

Figures 542–546. *C. claudia* n. sp. 542–545. Epigynum. 542. Dorsal, cleared. 543. Ventral, cleared. 544. Ventral. 545. Posterior. 546. Female.

Scale lines. 0.1 mm, except Figures 527, 534, 541, 546, 1.0 mm.





(Fig. 541); sternum brown; legs ringed brown on yellow. Abdomen with gray pattern (Fig. 541), few tiny silver spots; sides with gray streaks; venter black with two longitudinal light lines. Eyes subequal in size. Anterior medians 0.5 diameters apart, same distance from laterals. Posterior median eyes 0.5 diameters apart, their diameter from laterals. Abdomen sub-spherical, slightly pointed posteriorly. Total length, 4.5 mm. Carapace, 2.4 mm long, 1.9 mm wide. First femur, 3.0 mm; patella and tibia, 3.6 mm; metatarsus, 2.4 mm; tarsus, 1.1 mm. Second patella and tibia, 2.6 mm; third, 1.4 mm; fourth, 2.1 mm.

*Variation.* Total length of females varies from 4.3 to 5.4 mm.

*Diagnosis.* The lateral lips of the depression that overhang the septum anteriorly and the slightly punctate area anterior of the sculpturing of the epigynum (Fig. 539), distinguish this species from *C. flava*.

*Paratypes.* COLOMBIA *Dpto. Valle*: Cent. Hid. del Río Anchicayá, 400 m, ♀ (W. Eberhard, MCZ); Río Digua near Queremal, 19 June 1976, ♀ (W. Eberhard, no. 284, MCZ).

*Chrysometa claudia* new species  
Figures 542–546; Map 4

*Holotype.* Female from parama San José, between Las Gonzalez and La Mucutuy, 3,000 m, Est. Mérida, Venezuela, 13 Oct. 1984 (C. Sobrevila, USNM). The species is named after the collector.

*Description.* Female. Carapace whitish with brown marks on head and rim of thorax (Fig. 546); sternum with brownish sides; legs with dark rings. Dorsum of abdomen with brown scalloped-edged median band containing a black patch, silver spots to sides (Figs. 546); sides with scattered silver spots; venter with brownish band containing pair of black marks closer to spinnerets than to epigynum, with line of silver spots on each side. Anterior lateral eyes, posterior median eyes equal to 1.5 diameters of anterior medians; posterior lateral eyes equal to 1.3 diameters

of anterior median eyes. Anterior median eyes slightly more than their diameter apart, 1.5 diameters from laterals. Posterior median eyes 0.6 diameters apart, 1.2 diameters from laterals. Abdomen elongate oval. Total length, 5.0 mm. Carapace, 2.1 mm long, 1.5 mm wide. First femur, 3.2 mm; patella and tibia, 3.9 mm; metatarsus, 3.4 mm; tarsus, 1.3 mm. Second patella and tibia, 2.6 mm; third, 1.3 mm; fourth, 2.1 mm.

*Diagnosis.* The even curvature of the concave rims of septum and transverse bar of the epigynum (Fig. 544) distinguish this species from others.

*Chrysometa cebolleta* new species  
Figures 547–553; Map 4

*Holotype.* Female from Río Donachui, 3,000 m, Sierra Nevada de Santa Marta, Colombia, 19 Jan. 1974 (J. A. Kochalka, MCZ). The specific name is a noun in apposition after a collecting locality.

*Description.* Female. Carapace yellow with contrasting marks (Fig. 551). Sternum banded in black on each side, orange-yellow in middle; bands of equal width. Legs ringed and spotted. Dorsum of abdomen contrastingly marked (Fig. 551), without silver spots; venter with a black band, posterior third of band constricted by a light colorless patch on each side. Lateral eyes equal to diameter of anterior median eyes; posterior median eyes 1.2 diameters of anterior medians. Anterior median eyes slightly less than their diameter apart, 1.7 diameters from laterals. Posterior median eyes 0.7 diameters apart, 1.5 diameters from laterals. Abdomen elongate oval. Total length, 7.0 mm. Carapace, 3.2 mm long, 2.5 mm wide. First femur, 5.9 mm; patella and tibia, 6.5 mm; metatarsus, 5.2 mm; tarsus, 1.6 mm. Second patella and tibia, 4.2 mm; third, 2.1 mm; fourth, 3.2 mm.

Male. Carapace markings less distinct than those of female. Eyes subequal in size. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 diameters from laterals. Total

length, 4.5 mm. Carapace, 2.0 mm long, 1.7 mm wide. First femur, 4.4 mm; patella and tibia, 5.5 mm; metatarsus, 5.5 mm; tarsus, 1.6 mm. Second patella and tibia, 3.2 mm; third, 1.3 mm; fourth, 2.2 mm.

**Diagnosis.** The swollen anterior of the septum and the squarish transverse bar, together with the paired dark patches of the epigynum (Fig. 549), distinguish females. The tighter coiled conductor and embolus of the palpus (Figs. 552, 553) separate males from *C. nigrovittata*.

**Paratypes.** COLOMBIA *Dept. Magdalena*, Sierra Nevada de Santa Marta: Río Donachui Trail, 2,400–2,800 m, 2 Jan. 1973, ♀ (J. A. Kochalka, MCZ); Casa Antonio, Loma Cebolleta, 2,700 m, 15 Feb. 1974, ♂ (J. A. Kochalka, MCZ).

***Chrysometa guttata* (Keyserling),  
new combination**

Figures 554–560; Map 4

*Zilla guttata* Keyserling, 1881: 30:551, pl. 16, fig. 3, ♀. Female holotype from Amable Maria [Dpto. Junín] Peru, (PAN), examined.

*Araneus gemellus*:—Petrunkévitch, 1911: 293. New name for *Zilla guttata*, not *Epeira guttata* Keyserling.

*Zygiella guttata*:—Roewer, 1942: 887. Bonnet, 1959: 5002.

*Capichameta ribeiroi* Soares and Camargo, 1955: 574, fig. 6, ♂. Male holotype from Rio São José, Município de Colatina, Est. Espírito Santo, Brazil (MZSP), examined. NEW SYNONYMY.

**Description.** Female. Carapace, legs yellow; sternum grayish yellow. Dorsum of abdomen with silver spots spaced more than their diameter apart (Fig. 558); venter blackish on each side with pigmentless patch containing silver spots, extending from epigynum halfway to spinnerets; black ring around spinnerets, broken dorsally. Secondary eyes 1.3 diameters of anterior median eyes. Anterior median eyes slightly more than their diameter apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Abdomen oval. Total length, 4.7 mm. Carapace, 2.2 mm long, 1.7 mm wide. First femur, 2.7 mm; pa-

tella and tibia, 3.2 mm; metatarsus, 2.5 mm; tarsus, 0.9 mm. Second patella and tibia, 2.7 mm; third, 1.3 mm; fourth, 2.1 mm.

Male. Coloration like female. Posterior median eyes equal to diameter of anterior medians; lateral eyes 0.8 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, 0.3 diameters from laterals. Posterior median eyes 0.3 diameters apart, their diameter from laterals. Total length, 4.2 mm. Carapace, 2.3 mm long, 1.9 mm wide. First femur, 3.8 mm; patella and tibia, 4.3 mm; metatarsus, 3.8 mm; tarsus, 1.3 mm. Second patella and tibia, 3.4 mm; third, 1.4 mm; fourth, 2.3 mm.

**Variation.** Total length of females varies from 4.2 to 4.8 mm, of males from 3.7 to 4.2 mm.

**Diagnosis.** The epigynum is distinguished from others by a lateral, longitudinal lip that covers each end of the transverse bar and also encloses a small round opening and by a V-shaped dark mark anterior of the septum (Fig. 556). The paracymbium of the male palpus with a bifid “lower” prong (Figs. 559, 560) distinguishes the male.

**Natural History, Distribution.** Found in intermediate and low altitude forest, Amazon area (Map 4).

**Records.** VENEZUELA *Est. Aragua*: Rancho Grande, March 1946, ♀ (W. Beebe, AMNH). COLOMBIA *Dpto. Meta*: 5 km W of Villavicencio, 11 March 1955, ♂ (E. I. Schlinger, E. S. Ross, CAS). *Putumayo*: Río Putumayo nr. Pto. Asis, ♀ (W. Eberhard, no. 448, MCZ). PERU *Dpto. San Martín*: Mishqui-yacu, 20 km NE Moyobamba, 1,600 m, Aug. 1947, ♀ (F. Woytkowski, AMNH). *Huánuco*: Monson Valley, Tingo María, 1954, 4♀, 2♂ (E. I. Schlinger, E. S. Ross, CAS); Tingo María, sev. coll., ♀♀, ♂♂ (AMNH). BRAZIL *Est. Amazonas*: Reserva Ducke, Manaus, Aug. 1971, ♀ (M. E. Galiano, MG). *Mato Grosso*: 260 km N Xavantina, 12°49'S, 51°46'W, 400 m, gallery forest, Feb.–Apr. 1969, ♂ (Xavantina-Cachimpo Exped., MCZ).



*Chrysometa alboguttata*

(O. P.-Cambridge)

Figures 561–567; Map 4

*Meta alboguttata* O. P.-Cambridge, 1889: 2, pl. 1, figs. 1, 2, ♀, ♂. One female holotype, six female paratypes without locality data (BMNH), examined. Syntypes, according to O. P.-Cambridge, came from San Marcos, Tamahú, Panzós and Sakiyac, Guatemala and Bugaba, Panama.

*Argyropeira alboguttata*:—Keyserling, 1893: 317, pl. 16, fig. 233, ♀, ♂.

*Argyropeira rubromaculata*:—Keyserling, 1893: 332, pl. 17, figs. 245d, e, ♂, not female. Not *Tetragnatha rubromaculata* Keyserling, 1863.

*Meta superans* O. P.-Cambridge, 1896: 217, pl. 28, fig. 2, ♂. Two male syntypes from Teapa, Tabasco, Mexico (BMNH), examined. NEW SYNONYMY.

*Chrysometa alboguttata*:—Banks, 1898: 258.

*Pseudometa superans*:—F. P.-Cambridge, 1903: 445, pl. 42, fig. 18, ♂. Roewer, 1942, 1: 922. Bonnet, 1958: 3818.

*Pseudometa alboguttata*:—F. P.-Cambridge, 1903: 446, pl. 42, fig. 21, ♀. Roewer, 1942: 922. Bonnet, 1958: 3817.

*Note.* *Meta superans* is the male of *C. alboguttata*.

*Description.* Female. Carapace, sternum, legs yellow. Distal end of chelicerae and fang brown. Dorsum and sides of abdomen with small silver spots about their diameter apart (Fig. 565). On venter, a pair of longitudinal lines of silver spots, distinct anteriorly, fading out posteriorly. Posterior median eyes 1.2 diameters of anterior medians; both laterals same diameter as anterior medians. Anterior median eyes slightly more than their diameter apart, their diameter from laterals. Posterior median eye slightly less than their diameter apart, their diameter from laterals. Abdomen slightly longer than wide. Total length, 4.1 mm. Carapace, 1.7 mm long, 1.4 mm wide. First femur, 2.2 mm;

patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 2.0 mm; third, 1.2 mm; fourth, 1.7 mm.

Male. Carapace yellowish with a dark arrow pointing anteriorly in thoracic depression. Sternum, legs yellowish. Dorsum of abdomen with white spots. Secondary eyes slightly larger than anterior medians. Anterior median eyes slightly more than their diameter apart, 0.8 diameters from laterals. Posterior median eyes 0.7 diameters apart, their diameter from laterals. Total length, 3.5 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm; metatarsus, 2.7 mm; tarsus, 1.1 mm. Second patella and tibia, 2.7 mm; third, 1.2 mm; fourth, 1.8 mm.

*Note.* The descriptions were made from the type specimens of *alboguttata* and *superans*.

*Variation.* Total length of females varied from 3.5 to 5.2 mm, of males from 2.9 to 4.6 mm.

*Diagnosis.* The epigynum is distinguished by the concave, parallel sides of the septum, the transverse bar having lateral anterior lobes. The openings anterior of the lobes and the distribution of the dark patches around the sculpturing are diagnostic (Fig. 563). The male palpus has a distinct paracymbium whose proximal end is biforked, the "upper" fork pointing "down" in ventral view (Fig. 566), pointing ventrally in lateral view (Fig. 567).

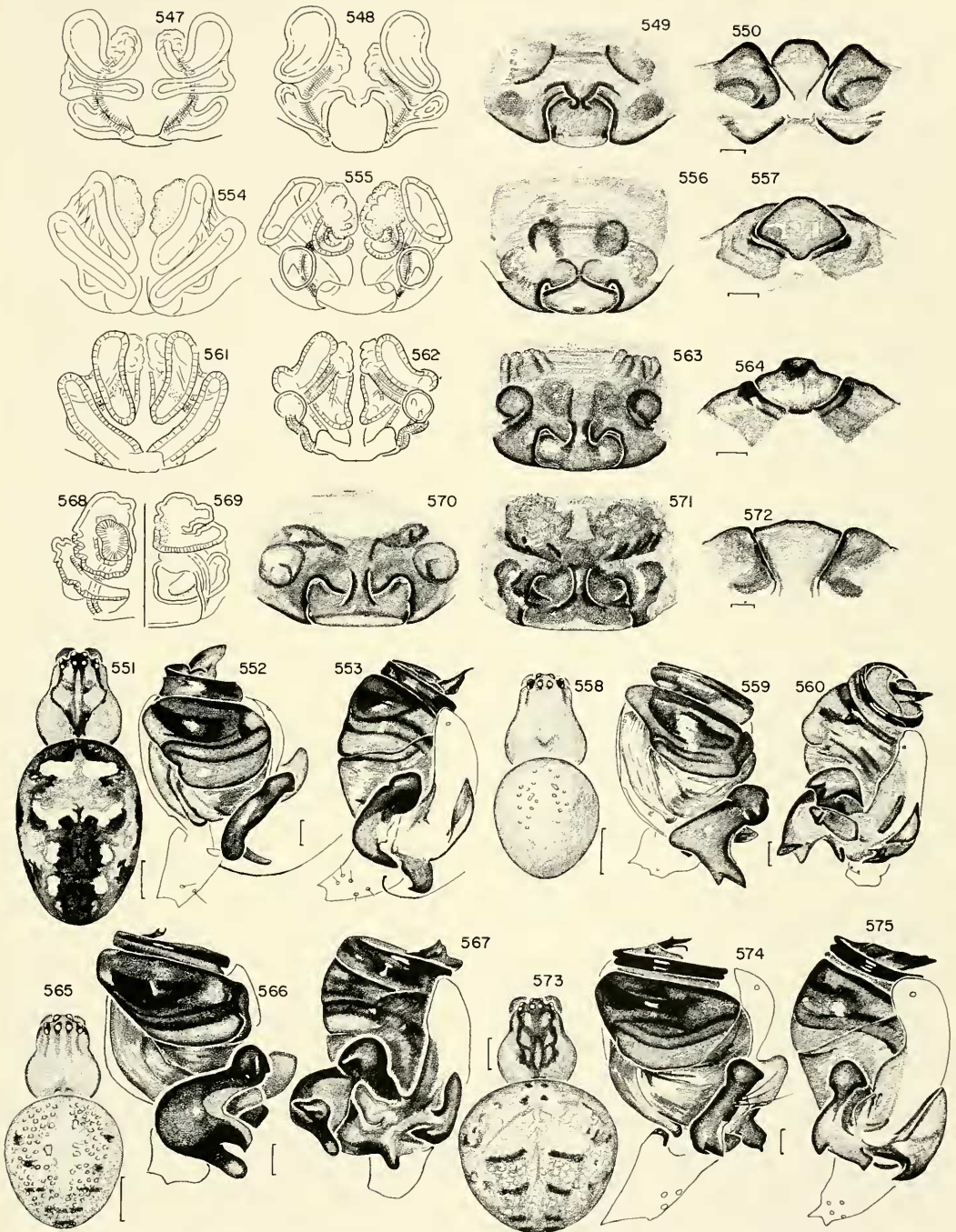
*Natural History, Distribution.* This is a low altitude to 1,300 m probably rain forest species. One record is from a cave. Mexico to Colombia (Map 4).

*Records.* MEXICO *Est. Tamaulipas:*

Figures 547–553. *Chrysometa cebolleta* n. sp. 547–550. Epigynum. 547. Dorsal, cleared. 548. Ventral, cleared. 549. Ventral. 550. Posterior. 551. Female. 552, 553. Left male palpus. 552. Ventral. 553. Lateral.

Figures 554–560. *C. guttata* (Keyserling). 554–557. Epigynum. 554. Dorsal, cleared. 555. Ventral, cleared. 556. Ventral. 557. Posterior. 558. Female. 559, 560. Male palpus. 559. Ventral. 560. Lateral.

Figures 561–567. *C. alboguttata* (O. P.-Cambridge). 561–564. Epigynum. 561. Dorsal, cleared. 562. Ventral, cleared. 563. Ventral. 564. Posterior. 565. Female. 566, 567. Male palpus. 566. Ventral. 567. Lateral.



Figures 568-575. *C. boraceia* n. sp. 568-571. Epigynum. 568. Dorsal, cleared. 569. Ventral, cleared. 570, 571. Ventral. 572. Posterior. 573. Female. 574, 575. Male palpus. 574. Ventral. 575. Lateral.

Scale lines. 0.1 mm, except Figures 551, 558, 565, 573, 1.0 mm.

Bee Cave, 8 km N of Chamal, 10 Apr. 1966, ♀ (J. Fish, AMNH). *San Luis Potosí*: Tamazunchale, ♀ (AMNH); 10 km S of Valles, ♀ (AMNH); Río Frio, ♂ (AMNH). *Sinaloa*: 3 km N of Piaxtla, ♀ (AMNH). *Nayarit*: 16 km SE of Tepic, ♀ (AMNH); Tepic, ♀ (AMNH); Compostela, 3♀ (AMNH). *Veracruz*: Martínez de la Torre, ♀ (AMNH); Lago Catemago, 3♂ (RL); near La Palma, ♀, ♂ (MCZ). *Guerrero*: Taxco, ♀ (AMNH). *Tabasco*: Teapa, ♀, ♂ (AMNH). *Chiapas*: La Zacualpa, ♀ (AMNH); Palenque ruins, ♀ (AMNH).

**HONDURAS** La Ceiba, ♂ (AMNH). **COSTA RICA** *Prov. San José*: San Isidro del General, 650–1,300 m, 4♀ (MCZ). *Cartago*: Turrialba, 2♀, ♂ (AMNH, MCZ). *Puntarenas*: 6 km S of San Vito, ♂ (MCZ). **PANAMA** *Prov. Bocas del Toro*: Bugaba, 5♂ (BMNH). *Chiriquí*: Boquete, ♀ (MCZ). **Panamá**: Pipeline Rd., ♀ (MCZ); Summit, ♀ (AMNH); Cocoli, ♂ (AMNH); Barro Colorado Isl., Gatun Lk., ♀ (CUC, AMNH).

**COLOMBIA** *Dpto. Magdalena*, Sierra Nevada de Santa Marta: San Pedro, 1,100–1,200 m, 3♀, 2♂ (IBNA, MCZ, USNM); above Minca Vall., 800 m, ♀ (IBNA); Río Frio, 500 m, 2♀ (USNM). *Bogotá*: Bogotá, ♂ (BMNH). Valle: many collections near Cali, 800 to 1,300 m (MCZ). **ECUADOR** *Prov. Los Ríos*: Juan Montalvo, ♂ (AMNH). Balzapamba, 700 m, ♂ (AMNH).

### *Chrysometa boraceia* new species

Figures 568–575; Map 4

**Holotype**. Female holotype and one female paratype from Boracéia, [Salesópolis], Est. São Paulo, Brazil (MZSP). The specific name is a noun in apposition after the locality.

**Description**. Female. Carapace orange-yellow with brown patches (Fig. 573); chelicerae, sternum orange-brown; legs orange-yellow with brown rings. Dorsum of abdomen with transverse black marks and white pigment spots (Fig. 573); venter with pair of white patches behind epigastric groove and a white longitudinal line on each side. Eyes subequal in size. Anterior median eyes their diameter apart,

0.7 diameters from laterals. Posterior median eyes 0.6 diameters apart, 1.3 diameters from laterals. Clypeus height 0.5 diameters of anterior median eyes. Abdomen spherical. Total length, 7.4 mm. Carapace, 3.1 mm long, 2.5 mm wide. First femur, 4.4 mm; patella and tibia, 5.5 mm; metatarsus, 3.6 mm; tarsus, 1.1 mm. Second patella and tibia, 3.9 mm; third, 1.9 mm; fourth, 2.9 mm.

**Male**. Coloration like female. Eyes subequal in size. Anterior median eyes their diameter apart, 0.4 diameters from laterals. Posterior median eyes 0.6 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 4.8 mm. Carapace, 2.4 mm long, 2.0 mm wide. First femur, 5.9 mm; patella and tibia, 7.6 mm; metatarsus, 6.0 mm; tarsus, 1.5 mm. Second patella and tibia, 4.7 mm; third, 1.7 mm; fourth, 2.7 mm.

**Variation**. The shape of the depressions in the epigynum is variable (Figs. 570, 571). Total length of females varies from 5.4 to 7.4 mm, males from 4.4 to 4.8 mm.

**Diagnosis**. The epigynum is distinguished by proportions of septum and transverse bar and by the transverse banded dark marks anterior of the depressions (Figs. 570, 571). The male palpus is separated from that of others by the shape of the tip of conductor and embolus and by the shape of the paracymbium and cymbium (Figs. 574, 575).

**Natural History, Distribution**. Low elevations to 1,600 m, southeastern Brazil (Map 4).

**Paratypes**. **BRAZIL** *Est. Rio de Janeiro*: Pico de Tijuca, 500–950 m, 17 April 1965, 4♀ (H. Levi, MCZ); Sumaré, 200–400 m, Feb. 1946, 3♀ (H. Sick, AMNH); Teresópolis, Nov. 1945, ♂, March 1946, 5♀ (H. Sick, AMNH). *São Paulo*: Boracéia, 22–23 Feb. 1961, 2♀ (P. de Biasi, MZSP), Dec. 1949, ♂ (Filho, MZSP), Oct. 1963, ♀ (Oliveira, P. Wygodzinsky, AMNH). *Rio Grande do Sul*: Canela, 11 May 1974, ♀ (A. Lise, MCN); São Francisco di Paula, 23 Jan. 1981, ♀ (A. Lise, MCN); Montenegro, 6 Oct. 1977, ♀ (A. Lise, MCN).



*Chrysometa fidelia* new species  
Figures 576–580; Map 4

*Holotype.* Female from above Fidelia, 2,000 m, Dept. Valle, Colombia, 2 Dec. 1965 (W. Eberhard, no. 143p, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow with brown markings; sternum brown, lighter in center; coxae yellow; legs ringed brown and yellow. Dorsum of abdomen with pattern of white and brown pigment spots, posteriorly with transverse bars (Fig. 580); venter dark between epigynum and spinnerets, longitudinal white line on each side. Secondary eyes 1.4 diameters of anterior medians. Anterior median eyes 1.2 diameters apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Total length, 5.3 mm. Carapace, 2.1 mm long, 1.6 mm wide. First femur, 3.2 mm; patella and tibia, 3.8 mm; metatarsus, 2.3 mm; tarsus, 1.1 mm. Second patella and tibia, 2.8 mm; third, 1.3 mm; fourth, 2.0 mm.

*Diagnosis.* The relative proportions of septum and transverse bar of the epigynum, the lateral oblique lips covering the ends of the bar, and the pattern of the dark patches (Fig. 578) distinguish this species.

*Chrysometa brevipes* (O. P.-Cambridge),  
new combination  
Figures 581–587; Map 4

*Meta brevipes* O. P.-Cambridge, 1889: 1, pl. 1, fig. 3, ♀. One female holotype and three female paratypes from Guatemala (BMNH), examined. O. P.-Cambridge cites only a single specimen from Chilasco, Guatemala.

*Argyropeira brevipes*:—Keyserling, 1893: 316, pl. 16, fig. 232, ♀.

*Pseudometa uncata* F. P.-Cambridge, 1903: 445, pl. 42, fig. 19, ♂. Male holotype from Teapa, Tabasco, Mexico (BMNH), examined. NEW SYNONYMY.

*Pseudometa brevipes*:—F. P.-Cambridge, 1903: 445, pl. 42, fig. 20, ♀. Roewer, 1942: 922. Bonnet, 1958: 3817.

*Note.* *Pseudometa uncata* is the male of *Chrysometa brevipes*.

*Description.* Female. Carapace yellowish white, indistinct darker streaks. Sternum orange; legs yellow. Dorsum and sides of abdomen with silver spots; dorsum with transverse gray marks (Fig. 585); venter with longitudinal median gray band; sides with silver spots more dense, forming longitudinal line. Posterior median eyes, anterior lateral eyes 1.5 diameters of anterior medians; posterior lateral eyes 1.3 diameters of anterior medians. Anterior median eyes their diameter apart, 2 diameters from laterals. Posterior median eyes slightly less than their diameter apart, their diameter from laterals. Abdomen spherical. Total length, 4.6 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 2.2 mm; patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 1.9 mm; third, 1.0 mm; fourth, 1.9 mm.

Male. Carapace light brown; sternum brownish, dark around margin; legs yellow-white. Dorsum and sides of abdomen with silver spots. Dorsum with faint indication of black folium with at least 3 transverse lines posteriorly; venter without pigment. Secondary eyes approximately 1.3 diameters of anterior median eyes. Anterior median eyes more than their diameter apart, 1.4 diameters from laterals. Posterior median eyes their diameter apart, 1.2 diameters from laterals. Total length, 3.5 mm. Carapace, 1.6 mm long, 1.3 mm wide. First femur, 2.6 mm; patella and tibia, 3.0 mm; metatarsus, 2.9 mm; tarsus, 0.9 mm. Second patella and tibia, 2.0 mm; third, 0.9 mm; fourth, 1.4 mm.

*Variation.* Total length of females varied from 3.4 to 5.1 mm, of males from 3.0 to 4.2 mm.

*Diagnosis.* Females can be distinguished from other sympatric species by the ventral markings of the abdomen: the two white bands together are wider than the intermediate black area. The depression of the epigynum is bordered by three lips making a diagnostic rectangular depression on each side anterior of the

transverse bar (Fig. 583). The male palpus is distinguished by two loops of the embolus above the tegulum (Figs. 586, 587) and by the almost circular paracymbium with a basal thumb in lateral view (Fig. 587).

*Natural History, Distribution.* Specimens were collected in oak and agave of cleared forest, in pine forest, oak-pine forest up to 3,000 m altitude from central Mexico to Guatemala (Map 4).

*Records.* MEXICO *Distrito Federal:* Contreras, 2,500–2,700 m, 30 May 1946, ♀ (AMNH), 23 July 1947, 2♀ (AMNH); Santa Rosa, 24 July 1947, ♀ (AMNH). *Mexico:* Mt. Toluca, ♀ (AMNH), San Francisco Oxtotilpan, ♀, ♂ (MCZ). *Michoacan:* Monte de Zacapu, 2,500 m, 24 Aug. 1959, ♀ (AMNH). *Puebla:* Río Frio, 3,000 m, 26 April 1942, ♀, ♂ (AMNH); summit SW of Río Frio, 2 Aug. 1966, ♀ (AMNH). *Morelos:* Coajomulco, 7 June 1946, ♀ (AMNH). *Oaxaca:* 48 km SW of Valle Nacional, 28 June 1983, ♀ (MCZ). *Chiapas:* nr. San Cristobal, July 1983, 5♀, ♂ (MCZ); July 1950, 2♀ (AMNH).

### *Chrysometa digua* new species Figures 588–592; Map 4

*Holotype.* Female from Río San Juan, at mouth of Río Digua, near El Queremal, 1,300 m, Dpto. Valle, Colombia, 1976 (W. Eberhard, MCZ). The specific name is a noun in apposition after the name of the river.

*Description.* Female. Carapace, ster-

num, legs orange-yellow; legs darker orange toward distal ends. Dorsum of abdomen with silver spots and paired gray marks (Fig. 592); venter with two longitudinal lines of silver spots. Anterior lateral eyes, posterior median eyes equal to diameter of anterior medians; posterior laterals 0.8 diameters of anterior median eyes. Anterior median eyes 0.8 diameters apart, 0.6 diameters from laterals. Posterior median eyes 0.8 diameters apart, 1.3 from laterals. Abdomen oval. Total length, 5.0 mm. Carapace, 2.3 mm long, 1.7 mm wide. First femur, 3.2 mm; patella and tibia, 4.0 mm; metatarsus, 3.5 mm; tarsus 1.3 mm. Second patella and tibia, 2.8 mm; third, 1.5 mm; fourth, 2.0 mm.

*Variation.* Total length of female varies from 4.7 to 5.8 mm.

*Diagnosis.* The epigynum of this species can be distinguished by the two diagonal lips anterior of the openings and by the proportions of septum and transverse bar (Fig. 590).

*Paratypes.* COLOMBIA *Dpto. Valle:* Cent. Hid. del Río Anchicayá, 400 m, 3♀ (W. Eberhard, nos. 861, 1249, MCZ); road to Anchicayá, 900 m, Nov. 1973, ♀ (W. Eberhard, no. 648, MCZ).

### *Chrysometa poas* new species Figures 593–600; Map 4

*Holotype.* Female holotype with 4 immature paratypes from cloud forest around rim of Volcan Poás, 2,500 m, Alajuela Prov., Costa Rica, 27 July 1983

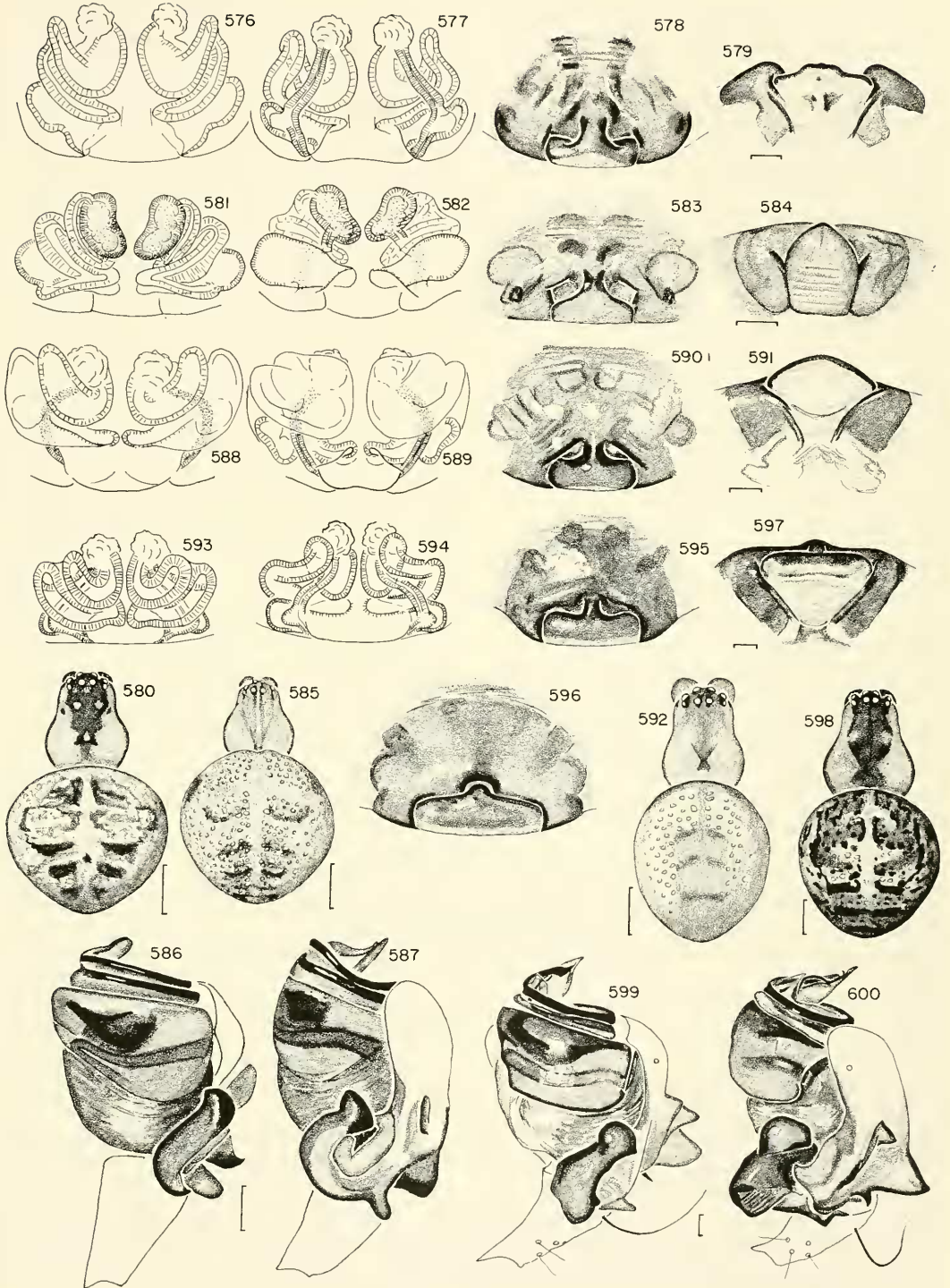
Figures 576–580. *Chrysometa fidelia* n. sp. 576–579. Epigynum. 576. Dorsal, cleared. 577. Ventral, cleared. 578. Ventral. 579. Posterior. 580. Female.

Figures 581–587. *C. brevipes* (O. P.-Cambridge). 581–584. Epigynum. 581. Dorsal, cleared. 582. Ventral, cleared. 583. Ventral. 584. Posterior. 585. Female. 586, 587. Left male palpus. 586. Ventral. 587. Lateral.

Figures 588–592. *C. digua* n. sp. 588–591. Epigynum. 588. Dorsal, cleared. 589. Ventral, cleared. 590. Ventral. 591. Posterior. 592. Female.

Figures 593–600. *C. poas* n. sp. 593–597. Epigynum. 593. Dorsal, cleared. 594. Ventral, cleared. 595, 596. Ventral. 595. (Holotype). 597. Posterior. 598. Female. 599, 600. Male palpus. 599. Ventral. 600. Lateral.

*Scale lines.* 0.1 mm, except Figures 580, 585, 592, 598, 1.0 mm.





(H., L. Levi, W. Eberhard, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace yellowish brown with black pattern (Fig. 598). Chelicerae orange-brown; sternum brown; coxae yellow; legs contrastingly ringed. Dorsum of abdomen with black mark surrounded by rusty patches, only a few silver spots; venter with square black mark with a line of silver spots on each side. Eyes subequal in size. Anterior median eyes 0.7 diameters apart, 0.7 diameters from laterals. Posterior median eyes 0.7 diameters apart, 1.3 diameters from laterals. Total length, 7.5 mm. Carapace, 3.6 mm long, 2.7 mm wide. First femur, 5.2 mm; patella and tibia, 6.7 mm; metatarsus, 5.4 mm; tarsus, 1.8 mm. Second patella and tibia, 4.8 mm; third, 2.7 mm; fourth, 3.8 mm.

Male from Cerro de la Muerte. Coloration like female. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.8 diameters apart, 1.3 diameters from laterals. Total length, 7.1 mm. Carapace, 3.9 mm long, 3.0 mm wide. First femur, 9.0 mm; patella and tibia, 12.1 mm; metatarsus, 12.8 mm; tarsus, 2.5 mm. Second patella and tibia, 8.2 mm; third, 3.5 mm; fourth, 5.1 mm.

**Variation.** The females have a similar appearance but there seems to be considerable variation in the epigynum and internal ducts (if they all belong to one species). Females vary in total length from 6.4 mm (central Mexico) to 8.7 mm (Costa Rica).

**Diagnosis.** The females are larger and darker than sympatric species (Fig. 598) and the epigynum usually has a heavy transverse bar and narrow septum (Figs. 595, 596). The male can be separated from others by the shape of the bulky paracymbium and by the modifications of the proximal end of the cymbium (Figs. 599, 600).

**Natural History, Distribution.** Found

at 1,000 to 2,300 m altitude in cloud forest from Mexico to western Panama (Map 4). The spider makes a web with the hub about one meter above the ground. Webs on Cerro Poás, Costa Rica, have (unlike many other *Chrysometa*) a full circle of sticky spirals, whereas those of other collecting sites have a vacant sector.

**Paratypes.** MEXICO *Est. Puebla*: near Xicotepec de Juarez, 1,000 m, 17 June 1983, ♀ (W. Maddison, MCZ). COSTA RICA *Prov. San José*: Pico Blanco above Escazu, 2,000 m, March 1983, ♀ (W. Eberhard, 2263, MCZ). *Cartago*: Cerro de la Muerte, Feb. 1979, July 1980, July 1983, 5♀, ♂ (J. Coddington, MCZ, USNM). *Puntarenas*: Monteverde cloud forest, 1,600 m, 24 July 1978, ♀ (C. L. Craig, Y. Lubin, MCZ). PANAMA *Prov. Chiriquí*: above Boquete, 1,200–1,900 m, 11 Aug. 1983, ♀ (H., L. Levi, MCZ); Cerro Punta nr. Guadalupe, 2,300 m, 25–27 Oct. 1983 (Y. Lubin, MCZ).

### *Chrysometa uaza* new species Figures 601–606; Map 4

**Holotype.** Female from Cerro Tinajillas, 3,100 m, Prov. Azuay, Ecuador, 18–21 March 1965 (L. Peña, MCZ). The name is an arbitrary combination of letters.

**Description.** Female. Carapace orange with dark brown marks (Fig. 606). Labium black. Sternum dark brown with median orange longitudinal band. Legs orange with black patches. Dorsum of abdomen with black patches and silver spots on sides (Fig. 606), sides with black streaks; venter black with line of silver spots on each side. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, their diameter from laterals. Posterior median eyes slightly less than their diameter apart, 1.2 diameters from laterals. Abdomen elongate oval. Total length, 8.6 mm. Carapace, 3.8 mm long, 2.8 mm wide. First femur, 5.8 mm; patella and tibia, 7.4 mm; metatarsus, 6.4 mm; tarsus, 2.0 mm. Second patella and tibia, 5.0 mm; third, 2.5 mm; fourth, 3.8 mm.

**Variation.** Total length of females varies from 8.6 to 9.5 mm.

**Diagnosis.** The epigynum is distinguished by a relatively narrow septum and by a transverse bar that is indistinct in outline and is variable (Figs. 603, 604).

**Paratype.** COLOMBIA *Dpto. Cauca*: path from Pilimbalá to Volcán Puracé, 3,690 m, Puracé Natl. Park, 12–13 Jan. 1983, ♀ (J. Kochalka, MCZ).

***Chrysometa lancetilla* new species**

Figures 607–611; Map 4

**Holotype.** Female holotype and one female paratype from Lancetilla, near Tela, *Dpto. Atlantida*, Honduras, July 1929 (A. M. Chickering, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace, sternum, legs yellow. First two femora with two rows of black dots on ventral side; tibiae, metatarsi, tarsi with distal black ring. Dorsum of abdomen with silver spots; sides with silver spots, black posteriorly above spinnerets (Fig. 611); venter with two patches containing silver spots behind epigynum, gray in between and behind extending to spinnerets. Eyes subequal in size. Anterior median eyes their diameter apart, slightly more than their diameter from laterals; posterior median eyes 0.7 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 5.5 mm. Carapace, 2.5 mm long, 1.9 mm wide. First femur, 3.1 mm; patella and tibia, 3.8 mm; metatarsus, 2.9 mm; tarsus, 1.2 mm. Second patella and tibia, 2.9 mm; third, 1.6 mm; fourth, 2.5 mm.

**Diagnosis.** The epigynum is distinguished from all others by the notches in the anterior lips of the opening on each side of the septum (Fig. 614).

***Chrysometa chipinque* new species**

Figures 612–617; Map 4

**Holotype.** Male from 5–10 km E of Rayon, Highway 195, near 17°2'N, 93°0'W, cloud forest edge, Chiapas, Mexico, 6 July 1983 (W. Maddison, R. S. Anderson, 83-097, MCZ). The specific name is a noun in apposition after one of the collecting localities.

**Description.** Female from Puebla. Carapace, sternum, legs orange; carapace with indistinct gray reticulations. Dorsum of abdomen with silver spots and indistinct gray transverse marks; venter gray with pair of patches containing silver spots behind genital groove. Anterior lateral eyes, posterior median eyes equal to 1.2 diameters of anterior medians; posterior lateral eyes slightly more than diameter of anterior median eyes. Anterior median eyes 0.6 diameters apart, same distance from laterals. Posterior median eyes 0.5 diameters apart, their diameter from laterals. Abdomen subspherical. Total length, 3.1 mm. Carapace, 1.6 mm long, 1.2 mm wide. First femur, 2.1 mm; patella and tibia, 2.5 mm; metatarsus, 1.9 mm; tarsus, 0.8 mm. Second patella and tibia, 1.9 mm; third, 0.9 mm; fourth, 1.5 mm.

**Male.** Carapace yellow, gray on sides of thorax. Sternum, legs yellow, first femur brown. Dorsum of abdomen with large silver patches; no pigment on venter. Anterior lateral eyes, posterior median eyes equal to diameter of anterior medians; posterior lateral eyes 0.8 diameters of anterior medians. Anterior median eyes their diameter apart, their diameter from laterals; posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Total length, 2.6 mm. Carapace, 1.5 mm long, 1.1 mm wide. First femur, 2.4 mm; patella and tibia, 2.7 mm; metatarsus, 2.4 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.0 mm; fourth, 1.5 mm.

**Variation.** Females vary in total length from 3.1 to 4.7 mm, males from 2.6 to 2.9 mm.

**Diagnosis.** The epigynum can be distinguished from that of *C. palenque* by the convex sides of the septum and by the curved arms of the transverse bar (Fig. 614); in posterior view, as in *C. palenque*, the median plate is tripartite. The male palpus is distinguished by the shape of the paracymbium, having in ventral view a mammal head and a flipper (Fig. 616) and

in lateral view a square with three lobes (Fig. 617).

*Natural History, Distribution.* Specimens have been collected in a cave, and at various elevations, including cloud forests, from Mexico to Guatemala (Map 4).

*Paratypes.* MEXICO *Est. Nuevo León:* Chipinque Mesa, S of Monterrey, 100.4°W, 23.0°N, 1,500 m, 2 June 1983, ♂ (W. Maddison, R. S. Anderson, no. 83-034, MCZ). *Veracruz:* Cueva del Ojo de Agua, Tlilpan, nr. Orizaba, 4 March 1973, ♀ (J. Reddell, AMNH). *Puebla:* Villa Juarez, 10 Oct. 1947, ♀, 2♂ (H. M. Wagner, AMNH). *Oaxaca:* 27 km SW of Valle Nacional, 24 June 1983, ♂ (W. Maddison, 83-084, MCZ). GUATEMALA San Pedro Yepocapa, March, April 1945, ♀ (H. Elishwitz, AMNH).

### *Chrysometa cambara* new species

Figures 618–623; Map 4

*Holotype.* Female holotype and one female paratype from Itaimbézinho, Cambara do Sul, Est. Rio Grande do Sul, Brazil, 5 Jan. 1985, one female, 6 Jan. 1985 (A. Lise, no. 12795, MCN). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellowish with median dusky band; sternum dusky yellowish; legs yellowish with indistinct dusky rings. Dorsum of abdomen with silver spots concentrated into lateral band, posteriorly with pairs of black transverse bars; sides with silver spots, dusky posteriorly; venter black with a longitudinal line on each side of silver spots. Eyes subequal in size. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.8 diameters

apart, 1.2 diameters from laterals. Abdomen narrow, elongate oval. Total length, 5.0 mm. Carapace, 2.4 mm long, 1.8 mm wide. First femur, 4.4 mm; patella and tibia, 5.4 mm; metatarsus, 5.2 mm; tarsus, 1.5 mm. Second patella and tibia, 3.7 mm; third, 1.7 mm; fourth, 2.8 mm.

Male. Carapace orange, head area brown, brown extending to thoracic depression; sternum orange; legs light orange with dark rings. Dorsum of abdomen gray with black spots on shoulders and transverse black bands on posterior half forming median band; venter with black patch on gray, no light lines. Secondary eyes equal to 0.8 diameters of anterior median eyes. Anterior median eyes 0.7 diameters apart, 0.5 diameters from laterals. Posterior median eyes 0.7 diameters apart, their diameter from laterals. Abdomen oval. Total length, 3.8 mm. Carapace 2.0 mm long, 1.6 mm wide. First femur, 3.9 mm; patella and tibia, 4.8 mm; metatarsus, 3.8 mm; tarsus, 1.1 mm. Second patella and tibia, 3.1 mm; third, 1.4 mm; fourth, 2.0 mm.

*Note.* It is not certain that the males and females belong together.

*Variation.* Total length of females 5.0 to 6.4 mm.

*Diagnosis.* The sclerotized dark lobes on each side of the septum of the epigynum (Fig. 620) distinguish this from all other species; in posterior view the lobes form a V (Fig. 621). The paracymbium of the male palpus, wider than long in lateral view (Fig. 623), and with the "upper" and "lower" prongs at right angles in ventral view (Fig. 622), distinguishes males.

*Paratypes.* BRAZIL *Est. Rio de Janeiro:*

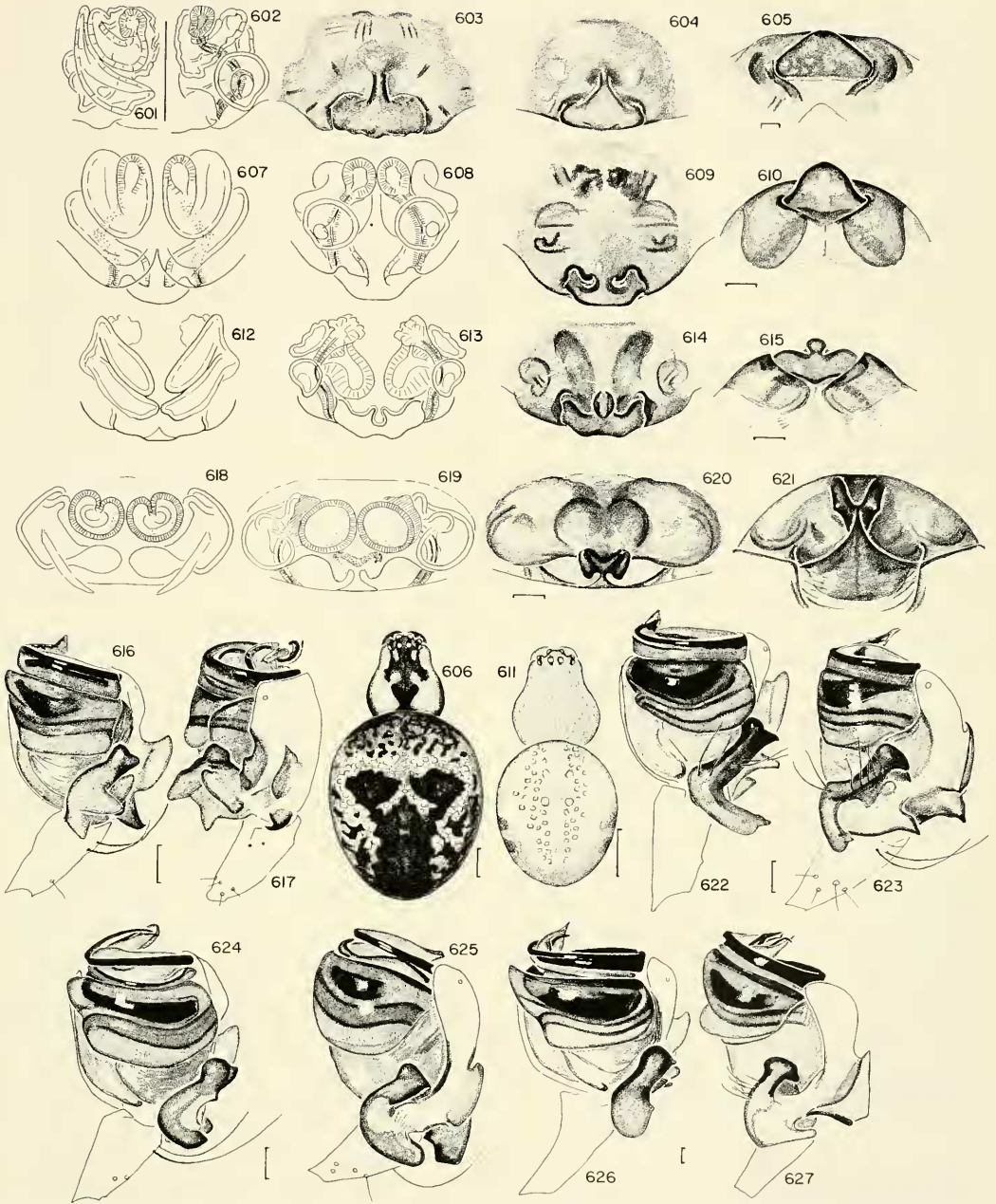
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Figures 601–606. *Chrysometa uaza* n. sp. 601–604. Epigynum. 601. Dorsal, cleared. 602. Ventral, cleared. 603, 604. Ventral. 605. Posterior. 606. Female. 601, 604. (Holotype).

Figures 607–611. *C. lancetilla* n. sp. 607–610. Epigynum. 607. Dorsal, cleared. 608. Ventral, cleared. 609. Ventral. 610. Posterior. 611. Female.

Figures 612–617. *C. chipinque* n. sp. 612–615. Epigynum. 612. Dorsal, cleared. 613. Ventral, cleared. 614. Ventral. 615. Posterior. 616, 617. Left male palpus. 616. Ventral. 617. Lateral.





Figures 618-623. *C. cambara* n. sp. 618-621. Epigynum. 618. Dorsal, cleared. 619. Ventral, cleared. 620. Ventral. 621. Posterior. 622, 623. Male palpus. 622. Ventral. 623. Lateral.

Figures 624, 625. *C. ramon* n. sp., male palpus. 624. Ventral. 625. Lateral.

Figures 626, 627. *C. columbicola* Strand, male palpus. 626. Ventral. 627. Lateral.

Scale lines. 0.1 mm, except Figures 606, 611, 1.0 mm.

ro: Teresópolis, 1,800 m, 15 March 1946, ♀, open stone cave, 2,100 m, 15 March 1946, ♀ (both H. Sick, AMNH). *Rio Grande do Sul*: Porto Alegre, 15 Aug. 1976, ♂ (P. A. Buckup, MCN), Itaimbézinho, Cambará do Sul, 5 Jan. 1985, ♀ (A. A. Lise, MCN).

*Chrysometa ramon* new species  
Figures 624, 625; Map 4

*Holotype*. Male from Estancia Naranjal, 1,000 m, San Ramon, Dept. Junín, Peru, 20–27 July 1965 (P., B. Wygodzinsky, AMNH). The specific name is a noun in apposition after the type locality.

*Description*. Male. Carapace, sternum orange, margin of thorax and head to thoracic depression darker; labium brown; legs distal end of first tibia gray. Dorsum of abdomen with a few white spots; sides with white pigment spots, posteriorly with indistinct transverse gray marks. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, same distance from laterals. Posterior median eyes 0.5 diameters apart, slightly more than their diameter from laterals. Abdomen narrow oval. Total length, 3.8 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 3.9 mm; patella and tibia, 4.9 mm; metatarsus, 5.2 mm; tarsus, 1.3 mm. Second patella and tibia, 2.9 mm; third, 1.3 mm; fourth, 2.1 mm.

*Diagnosis*. The palpus of this species differs from others by having two coils of the embolus and its supports above the tegulum (Figs. 624–625), and the “lower” end of the paracymbium is heavier (Fig. 625) than that of *C. columbicola*.

*Chrysometa columbicola* Strand  
Figures 626, 627; Map 4

*Chrysometa columbicola* Strand, 1915: 103. Male holotype from Popayán, Prov. Cauca, Colombia (SMF), examined. Roewer, 1942: 913. Bonnet, 1956: 1082.

*Description*. Male. Carapace, legs yellow-brown. Chelicerae dark brown. Dorsum of abdomen with silver spots, except no spots in narrow dorsal longitudinal line, on an anterior cross band, and on shallow

humps. Sides, venter with silver spots. Thoracic depression deep. Eyes subequal in size. Anterior medians their diameter apart, slightly more than their diameter from laterals. Posterior median eyes slightly less than their diameter apart, 1.6 from laterals. Legs long. Abdomen oval, widest anteriorly, with indications of dorsal humps. Total length, 7.5 mm. Carapace, 3.5 mm long, 2.8 mm wide. First femur, 9.6 mm; patella and tibia, 12.3 mm; metatarsus, 8.4 mm; tarsus, 5.7 mm. Second patella and tibia, 6.7 mm; third, 3.8 mm; fourth, 5.8 mm.

*Diagnosis*. The large size and long legs set this specimen apart. The palpus is distinguished by having three coils of the embolus, two behind the tegulum wall, and by the shape of the paracymbium which has a dorsally directed finger on its base (Figs. 626, 627).

*Note*. Figures 626, 627 are the mirror images of the right palpus.

*Chrysometa eugeni* new species  
Figures 628–634; Map 4

*Chrysometa tenuipes*:—Simon, 1897: 870 (misidentification, not *C. tenuipes* Keyserling).

*Holotype*. Female holotype and five females, three male paratypes from St. Vincent Island, Lesser Antilles (BMNH); one female, one male, one immature (MNHN). The species is named after E. Simon.

*Description*. Female. Carapace, sternum yellow; legs yellow with distal ends of tibiae, metatarsi, and tarsi orange. Dorsum, sides of abdomen with silver spots more than their diameter apart, largest ones on sides; venter with few silver spots. Eyes subequal in size, small. Anterior median eyes their diameter apart, three diameters from laterals. Posterior median eyes 1.7 diameters apart, same distance from laterals. Abdomen oval, slightly pointed anteriorly (Fig. 632). Total length, 4.5 mm. Carapace, 1.9 mm; long, 1.3 mm wide. First femur, 3.0 mm; patella and tibia, 3.5 mm; metatarsus, 3.1 mm; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.3 mm; fourth, 2.1 mm.

Male. Coloration like female. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, 2 diameters from laterals. Posterior median eyes 1.5 diameters apart, same distance from laterals. Abdomen elongate, pointed anteriorly, with slight hump posteriorly. Total length, 3.8 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 3.9 mm; patella and tibia, 4.8 mm; metatarsus, 4.6 mm; tarsus, 1.2 mm. Second patella and tibia, 3.1 mm; third, 1.5 mm; fourth, 2.4 mm.

**Diagnosis.** The epigynum is separated from that of *C. flavicans* by having shadows of loops anterior of the sculpturing and by having the anterior lips of the depressions overlapping the septum (Fig. 630). The male is distinguished by a unique hook of the distal end of the embolus and its supporting structures (Figs. 633, 634).

*Chrysometa flavicans* (Caporiacco),  
new combination

Figures 635–639; Map 4

*Pseudometa flavicans* Caporiacco, 1947: 24. Female holotype from valley of Demerara River, Guyana (MZUF), examined.

*Capichameta flavicans*:—Brignoli, 1983: 227.

**Description.** Female. Carapace light orange-yellow; sternum orange; legs orange-yellow, ringed. Dorsum of abdomen with indistinct gray pattern underlain by silver spots about their diameter apart (Fig. 639), venter gray. Eyes small, subequal in size. Anterior median eyes their diameter apart, 1.5 diameters from laterals. Posterior median eyes their diameter apart, 2 diameters from laterals. Abdomen soft and elongate. Total length, 5.9 mm. Carapace, 2.5 mm long, 2.0 mm wide. First femur, 3.9 mm; patella and tibia, 5.0 mm; metatarsus, 4.2 mm; tarsus, 1.3 mm. Second patella and tibia, 3.2 mm; third, 1.9 mm; fourth, 3.0 mm.

**Variation.** Total length of females varies from 5.9 to 6.9 mm.

**Diagnosis.** The epigynum differs from that of *C. eugeni* by having the septum

overlap the anterior margins of the depressions and by lacking the paired dark loops anterior of its sculpturing (Fig. 637).

**Natural History, Distribution.** This is a low altitude forest species found from Guyana to the Amazon area (Map 4).

**Records.** SURINAM *Brokopondo Prov.*: Browns Berg, 20 Feb. 1982, 2♀ (D. Smith Trail, MCZ). BRAZIL *Est. Amazonas*: Reserva Ducke, Manaus, Aug. 1971, ♀ (M. E. Galiano, MG).

*Chrysometa puebla* new species  
Figures 640–646; Map 4

**Holotype.** Male holotype and female abdomen from Río Frio, 3,000 m, Puebla, Mexico, 26 April 1942 (C. Bolivar, C. Osorio, D. Pelaez, AMNH).

**Description.** Female. Abdomen oval (Fig. 644).

Male. Carapace light orange with two paraxial dusky lines extending posteriorly from posterior median eyes and fusing at thoracic depression; sternum black with anteromedian longitudinal orange mark; legs orange with indistinct gray rings. Dorsum of abdomen with scattered silver spots, black and gray coloring similar to female (Fig. 644); venter with two silver lines. Secondary eyes equal to 1.2 diameters of anterior median eyes. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes slightly less than their diameter apart, their diameter from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 4.8 mm; patella and tibia, 6.1 mm; metatarsus, 5.3 mm; tarsus, 1.6 mm. Second patella and tibia, 3.8 mm; third, 1.5 mm; fourth, 2.5 mm.

**Diagnosis.** The epigynum is distinguished by the narrow septum with strongly concave sides, by the distal part of the posterior transverse bar being a dark lobe (Fig. 642) and by the pentagonal median plate in posterior view (Fig. 643). The male has two loops of embolus and supporting structures above the tegulum (Figs. 645, 646) and a paracymbium with an



“upper” pointed knob and a “lower” point (Fig. 646).

***Chrysometa tenuipes* (Keyserling)**

Figures 647–651; Map 4

*Tetragnatha tenuipes* Keyserling, 1863: 147, pl. 7, figs. 12, 13, ♀ [not fig. 14, ♂]. Female lectotype here designated, five female paralectotypes of this species from Santa Fé de Bogota [Bogotá], Colombia, and three female, one juvenile, one male paralectotypes, which are actually *C. bolivia* (BMNH), examined.

*Argyropeira tenuipes*:—Keyserling, 1893: 335, pl. 17, fig. 247 [♀ not ♂].

*Chrysometa tenuipes*:—Roewer, 1942: 914. Bonnet, 1956: 1083. [not *Chrysometa tenuipes*:—Simon].

**Note.** A specimen that Keyserling (1863) had illustrated was chosen as lectotype.

**Description.** Female. Carapace yellow, sides and middle of thorax orange; sternum, legs yellow, distal ends of tibiae reddish-brown. Dorsum of abdomen with silver patches their diameter apart, absent from midline, from around pedicel, and near spinnerets. Eyes subequal in size. Anterior median eyes their diameter apart, 1.3 diameters from laterals. Posterior median eyes 1.2 diameters apart, same distance from laterals. Abdomen oval, narrow anteriorly, wide and rounded posteriorly (Fig. 651). Total length, 8.3 mm. Carapace, 2.8 mm long, 1.8 mm wide. First femur, 3.4 mm; patella and tibia, 6.4 mm; metatarsus, 6.3 mm; tarsus, 1.9 mm. Second patella and tibia, 4.5 mm; third, 2.3 mm; fourth, 3.5 mm.

**Diagnosis.** The female is distinguished by the shape of the abdomen (Fig. 651), the long septum of the epigynum, and the paired, curved, diagonal shadows of the connecting ducts anterior of the sculpturing (Fig. 649).

***Chrysometa macuchi* new species**

Figures 652–657; Map 4

**Holotype.** Female from Macuchi, 0°59'S, 79°04'W, Prov. Cotopaxi, Ecuador, March 1943 (H. E. Frizzell, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace orange with black marks; sternum orange, sides darker; legs ringed orange and black. Dorsum of abdomen with silver spots and black marks (Fig. 656); venter with black marks different from other species (Fig. 657). Anterior lateral eyes equal to 1.3 diameters of anterior medians; posterior median eyes equal to diameter of anterior median eyes, posterior laterals equal to 1.2 diameters of anterior medians. Anterior median eyes their diameter apart, their diameter from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen spherical (Fig. 656). Total length, 4.7 mm. Carapace, 1.8 mm long, 1.5 mm wide. First femur, 3.1 mm; patella and tibia, 3.6 mm; metatarsus, 2.3 mm; tarsus, 0.9 mm. Second patella and tibia, 2.5 mm; third, 1.2 mm; fourth, 1.8 mm.

Figures 628–634. *Chrysometa eugeni* n. sp. 628–631. Epigynum. 628. Dorsal, cleared. 629. Ventral, cleared. 630. Ventral. 631. Posterior. 632. Female. 633, 634. Left male palpus. 633. Ventral. 634. Lateral.

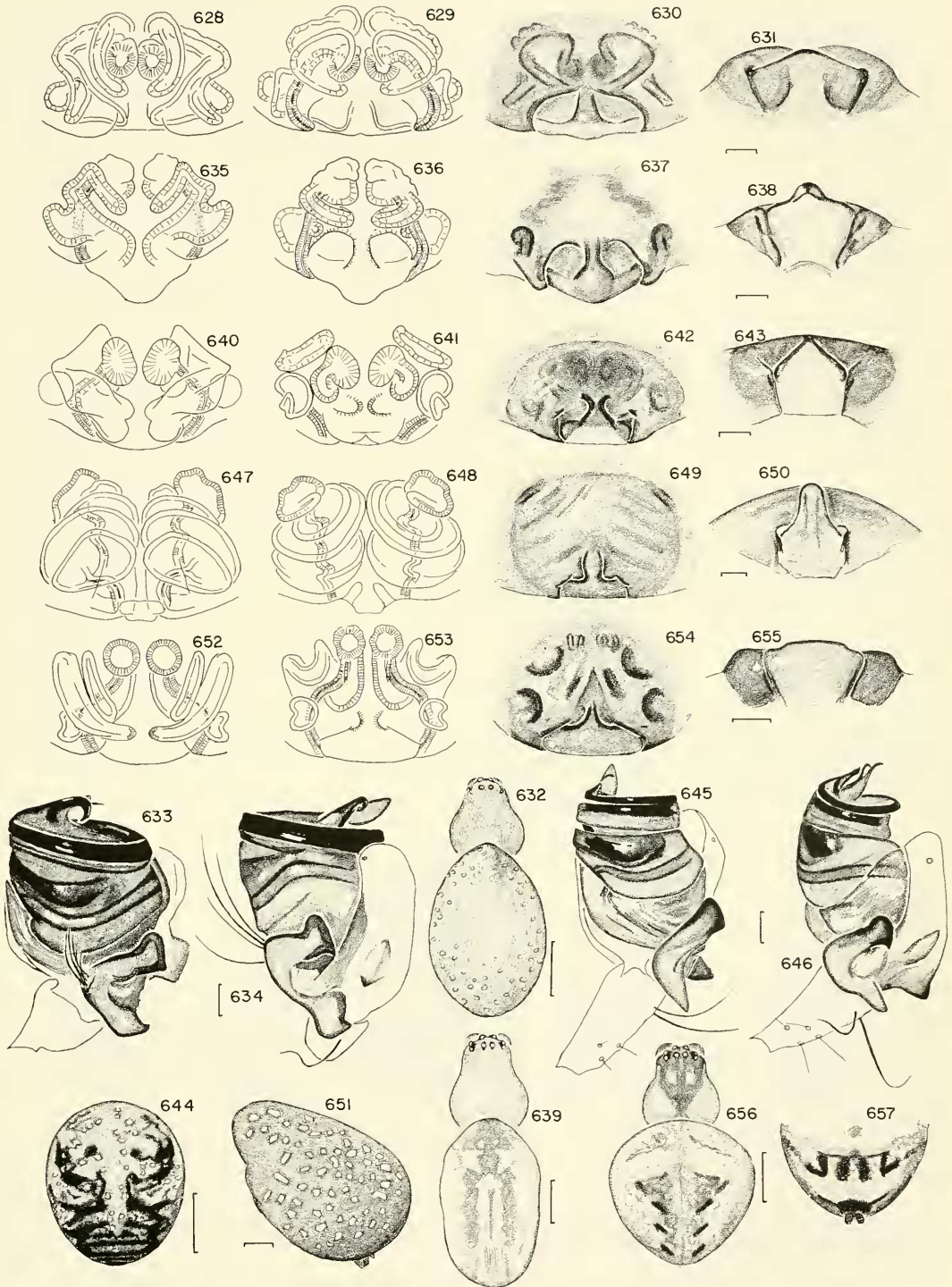
Figures 635–639. *C. flavicans* (Caporiacco). 635–638. Epigynum. 635. Dorsal, cleared. 636. Ventral, cleared. 637. Ventral. 638. Posterior. 639. Female.

Figures 640–646. *C. puebla* n. sp. 640–643. Epigynum. 640. Dorsal, cleared. 641. Ventral, cleared. 642. Ventral. 643. Posterior. 644. Female abdomen, dorsal. 645, 646. Male palpus. 645. Ventral. 646. Lateral.

Figures 647–651. *C. tenuipes* (Keyserling). 647–650. Epigynum. 647. Dorsal, cleared. 648. Ventral, cleared. 649. Ventral. 650. Posterior. 651. Female abdomen, lateral.

Figures 652–657. *C. macuchi* n. sp. 652–655. Epigynum. 652. Dorsal, cleared. 653. Ventral, cleared. 654. Ventral. 655. Posterior. 656. Female. 657. Female abdomen, ventral.

**Scale lines.** 0.1 mm, except Figures 632, 639, 644, 651, 656, 657, 1.0 mm.



**Diagnosis.** This species can be distinguished by the ventral markings of the abdomen (Fig. 657), and by the epigynum which has a narrow septum within a triangular depression and paired curved marks anterior of the sculptured area (Fig. 654).

**Paratype.** PERU *Dpto. Cajamarca:* W of Porcullo [Porculla, 2,145 m, Piura, 05°51'S, 79°31'W], May 1967, ♀ (S. Risco, A. Archer, AMNH).

***Chrysometa muerte* new species**  
**Figures 658–662; Map 4**

**Holotype.** Female from Cerro de La Muerte, Cartago Prov., Costa Rica, 27 Aug. 1980 (J. Coddington, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace yellow with brown pattern (Fig. 662); sternum brown, lightest in center. Coxae light yellow; legs yellow, ringed. Dorsum of abdomen with black marks and tiny silver spots (Fig. 662); venter with black patch between epigynum and spinnerets, longitudinal line of silver spots along each side. Anterior lateral eyes 1.3 diameters of anterior medians; posterior median eyes 1.3 diameters, posterior laterals 1.2 diameters. Anterior median eyes their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, slightly more than their diameter from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 1.9 mm long, 1.3 mm wide. First femur, 3.0 mm; patella and tibia, 3.7 mm; metatarsus, 2.7 mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.2 mm; fourth, 1.8 mm.

**Diagnosis.** This species is smaller than *C. poas* but has a similar epigynum (Fig. 660). The epigynum is distinguished by the paired dark marks anterior of the

sculptured area (Fig. 660) and by the relatively simple internal genitalia (Figs. 658, 659).

**Record.** COLOMBIA *Dpto. Valle:* Río Tulva near Mateguadua, 1,100 m, Aug. 1977, ♀ (determination uncertain) (W. Eberhard, MCZ).

***Chrysometa palenque* new species**  
**Figures 663–666; Map 4**

**Holotype.** Female from Palenque ruins, Chiapas, Mexico, 28 May 1980 (J. Coddington, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace yellow with contrasting black marks; chelicerae orange with gray; sternum gray on orange; legs yellow, ringed gray. Dorsum of abdomen with few white pigment spots except on sides and in patch above spinnerets; venter black with white band on each side narrowing posteriorly. Eyes subequal in size. Anterior median eyes 0.7 diameters apart, same distance from laterals. Posterior median eyes 0.7 diameters apart, 1.2 diameters from laterals. Abdomen oval. Total length, 6.5 mm. Carapace, 2.8 mm long, 2.1 mm wide. First femur, 3.5 mm; patella and tibia, 4.2 mm; metatarsus, 3.2 mm; tarsus, 1.3 mm. Second patella and tibia, 3.1 mm; third, 1.7 mm; fourth, 2.5 mm.

**Male.** The palpus of a male found after completion of the revision was similar to that of *C. universitaria*.

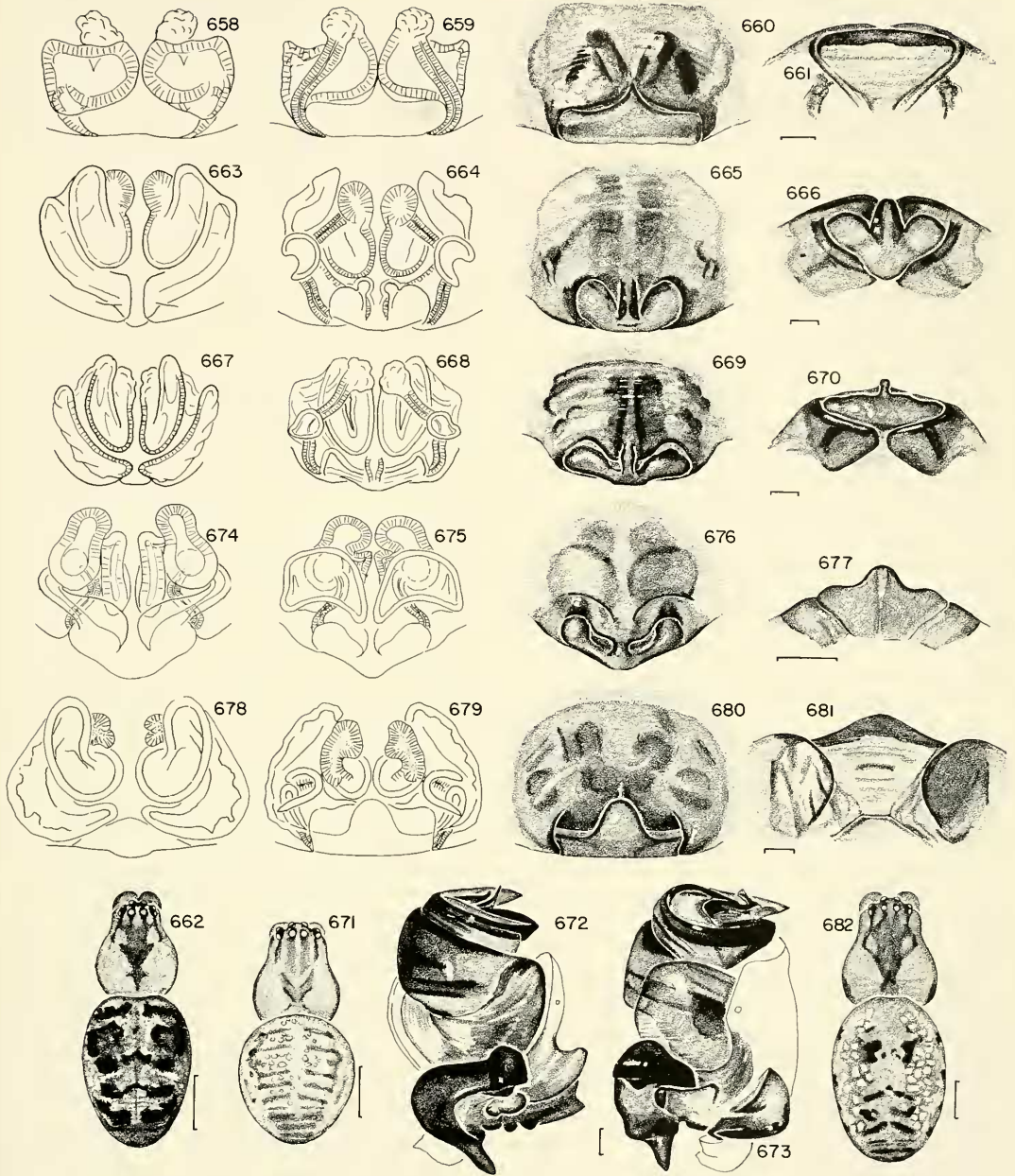
**Note.** Abdomen is in poor condition.

**Diagnosis.** The epigynum of this species is distinguished by wide, bulging ends of the transverse bar, the anterior end of the bulge being about in line with the anterior end of the septum (Fig. 665). In posterior view the median plate appears tripartite (Fig. 666).

Figures 658–662. *Chrysometa muerte* n. sp. 658–661. Epigynum. 658. Dorsal, cleared. 659. Ventral, cleared. 660. Ventral. 661. Posterior. 662. Female.

Figures 663–666. *C. palenque* n. sp., epigynum. 663. Dorsal, cleared. 664. Ventral, cleared. 665. Ventral. 666. Posterior.





Figures 667–673. *C. universitaria* n. sp. 667–670. Epigynum. 671. Female. 672, 673. Left male palpus. 672. Ventral. 673. Lateral.

Figures 674–677. *C. otavalo* n. sp., epigynum. 674. Dorsal, cleared. 675. Ventral, cleared. 676. Ventral. 677. Posterior.

Figures 678–682. *C. incachaca* n. sp. 678–681. Epigynum. 678. Dorsal, cleared. 679. Ventral, cleared. 680. Ventral. 681. Posterior. 682. Female.

Scale lines. 0.1 mm, except Figures 662, 671, 682, 1.0 mm.

*Paratypes.* HONDURAS *Dpto. Atlántida*: Lancetilla, July 1929, 5♀, ♂ (A. M. Chickering, AMNH, MCZ, USNM).

***Chrysometa universitaria* new species**  
**Figures 667–673; Map 4**

*Holotype.* Female from Ciudad Universitaria, San José, Costa Rica, 10 Jan. 1979 (J. Coddington, MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace yellow with gray streaks. Legs yellow, ringed. Dorsum of abdomen with silver spots and transverse bars (Fig. 671). Anterior lateral eyes, posterior median eyes 1.3 diameters of anterior medians; posterior lateral eyes equal to diameter of anterior medians. Anterior median eyes 0.8 diameters apart, their diameter from laterals. Posterior median eyes 0.5 diameters apart, their diameters from laterals. Abdomen oval. Total length, 4.5 mm. Carapace, 2.0 mm long, 1.6 mm wide. First femur, 2.6 mm; patella and tibia, 3.1 mm; metatarsus, 2.4 mm; tarsus, 1.1 mm. Second patella and tibia, 2.4 mm; third, 1.3 mm; fourth, 1.9 mm.

Male from Volcán, Panama. Coloration like female. Eyes subequal in size. Anterior median eyes their diameter apart, slightly less than their diameter from laterals. Posterior median eyes 0.5 diameters apart, their diameter from laterals. Abdomen oval. Total length, 4.2 mm. Carapace, 2.1 mm long, 1.8 mm wide. First femur, 3.1 mm; patella and tibia, 3.8 mm; metatarsus, 3.1 mm; tarsus, 1.1 mm. Second patella and tibia, 3.0 mm; third, 1.3 mm; fourth, 1.9 mm.

*Variation.* Females vary in total length from 3.8 to 5.2 mm.

*Diagnosis.* The epigynum of this species is distinguished from *C. chipinique* and *C. palenque* by a wider transverse bar and smaller septum and from *C. chipinique* by the swellings of the bar's arm and by the anterior longitudinal parallel dark marks (Fig. 669). The palpus of the male has a heavily sclerotized paracymbium curved

in ventral view (Fig. 672) with a "lower" thumb in lateral view (Fig. 673).

*Natural History, Distribution.* Found at 1,300 to 1,500 m in Costa Rica and western Panama (Map 4).

*Paratypes.* COSTA RICA *Prov. Heredia*: NE of San Rafael, 1,400 m, June 1980, 4♀ (W. Eberhard, MCZ). *San José*: San José, 30 Sept. 1980, ♀ (R. W. Work, W. Eberhard, MCZ); Ciudad Universitaria, 10 Jan. 1979, ♀ (J. Coddington, MCZ); San Antonio de Escazú, 1,300 m, 1981, ♀ (W. Eberhard, MCZ). *Puntarenas*: Monte-verde, Campbell's Woods, 1,500 m, 8 Feb. 1979, 2♀ (J. Coddington, MCZ); Monte-verde, Biological Reserve, 8 Feb. 1979, ♀ (J. Coddington, MCZ). PANAMA *Prov. Chiriquí*: Boquete, Aug. 1954, ♀ (A. Chickering, MCZ); Volcán, 20 Feb. 1936, 7♀, 2♂, 2 Mar. 1936, ♀, 2♂, 26 Feb. 1936, ♀ (W. J. Gertsch, AMNH); near Río Sereno, 10 Aug. 1983, ♀ (L. N. Sorkin, AMNH).

***Chrysometa otavalo* new species**  
**Figures 674–677; Map 4**

*Holotype.* Female from Otavalo, Atuela, 2,200 m ? *Prov. Pichincha*, Ecuador, 8–9 Sept. 1977 (L. Peña, AMNH). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace orange, black between anterior median eyes; sternum orange-brown; legs orange, distal articles darker, without rings. Dorsum of abdomen with silver spots, except above heart and some posteriorly pointing branches; sides without spots; venter with rectangular gray patch, with pair of silver spots anterior of spinnerets, and black mark on each side of spinnerets. Anterior lateral eyes, posterior median eyes equal to 1.3 diameters of anterior medians; posterior lateral eyes equal to 1.2 diameters of anterior medians. Anterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Posterior median eyes slightly less than their diameter apart, 1.3 diameters from laterals. Abdomen oval, sides almost parallel, anterior and posterior equally

rounded. Total length, 3.0 mm. Carapace, 1.1 mm long, 1.0 mm wide. First femur, 1.7 mm; patella and tibia, 2.0 mm; metatarsus, 1.7 mm; tarsus, 0.7 mm. Second patella and tibia, 1.6 mm; third, 0.8 mm; fourth, 1.1 mm.

**Diagnosis.** The epigynum of this species is distinguished by the rims of the septum continuing anteriorly and diagonally and surrounding the ends of the transverse bar (Fig. 676). There is a pair of round dark patches anterior of the lateral ends of the bar (Fig. 676).

***Chrysometa incachaca* new species**

Figures 678–682; Map 4

**Holotype.** Female from Incachaca, 2,100 m, Dpto. Cochabamba, Bolivia, 30 Aug. 1956 (L. Peña, IRSNB). The species name is a noun in apposition after the type locality.

**Description.** Female. Carapace light orange with brown pattern; sternum light orange; legs light orange, indistinctly ringed. Dorsum of abdomen with black marks on shoulders, broken chevrons posteriorly, and large silver spots on sides (Fig. 682); sides with scattered small silver spots and black marks; venter with two light longitudinal lines of small silver spots and a pair of dusky streaks anterior of spinnerets. Anterior lateral eyes equal to 1.4 diameters of anterior medians; posterior median eyes equal to 1.3 diameters; posterior laterals equal to diameter of anterior median eyes. Anterior median eyes slightly more than their diameter apart, same distance from laterals. Posterior median eyes 0.8 diameters apart, 1.3 diameters from laterals. Abdomen elongate oval. Total length, 6.2 mm. Carapace, 2.7 mm long, 2.0 mm wide. First femur, 4.5 mm; patella and tibia, 5.7 mm; metatarsus, 5.2 mm; tarsus, 1.9 mm. Second patella and tibia, 3.9 mm; third, 1.9 mm; fourth, 2.8 mm.

**Diagnosis.** The epigynum of this species is distinguished by a swollen septum, a median projection of the transverse bar (Fig. 680).

***Chrysometa calima* new species**

Figures 683–690; Map 4

**Holotype.** Female from Lago Calima, 1,400 m, Dpto. Valle, Colombia, Jan. 1979 (W. Eberhard, no. 1824, MCZ). The specific name is a noun in apposition after the type locality.

**Description.** Female. Carapace, sternum and legs yellow. Dorsum of abdomen with silver spots; venter with silver spots only on sides. Eyes small, subequal in size. Anterior median eyes 1.5 diameters apart, more than twice their diameter from laterals. Posterior median eyes less than 2 diameters apart, more than twice their diameter from laterals. Clypeus equal to 1.5 diameters of anterior median eyes. Abdomen oval with a slight median anterior hump (Fig. 688). Total length, 5.4 mm. Carapace, 2.1 mm long, 1.5 mm wide. First femur, 3.0 mm; patella and tibia, 3.6 mm; metatarsus, 3.1; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.3 mm; fourth, 2.1 mm.

**Male.** Coloration lighter than female, with some black spots on dorsum of abdomen. Eyes like female. Total length, 3.8 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 4.0 mm; patella and tibia, 4.9 mm; metatarsus, 5.1 mm; tarsus, 1.3 mm. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth, 2.3 mm.

**Variation.** Females vary in total length from 5.2 to 6.2 mm, males from 3.8 to 5.2 mm.

**Diagnosis.** The epigynum of this species has septum and bar surrounded by a semi-circular lip; the openings are diagonal notches on each side (Fig. 685). In ventral view (Fig. 689) the paracymbium resembles that of *C. universitaria*, in lateral view the “lower” prong is curved at a right angle (Fig. 690).

**Natural History, Distribution.** Found 1,000 to 1,500 m, in Colombia (Map 4).

**Paratypes.** COLOMBIA Dpto. Magdalena, Sierra Nevada de Santa Marta: Valle Leonor, Serra Nueva Granada, 1,300 m, 12 April 1975, ♂ (J. Kochalka, MCZ);



Serra Nueva Granada, 1,500 m, 28 April 1975, 2♀ (J. Kochalka, MCZ); San Pedro, 1,100–1,200 m, 3 April 1975, 19 May 1975, 2♀ (J. Kochalka, IBNA). *Valle*: Cali, 1,000 m, 1973–1974, ♂ (W. Eberhard, MCZ); Lago Calima, 1,400 m, Jan. 1979, ♀, 4♂ (W. Eberhard, no. 1824, 1850, MCZ).

*Chrysometa opulenta* (Keyserling)  
Figures 691–698; Map 4

*Meta opulenta* Keyserling, 1880: 558, pl. 16, fig. 9, ♀, ♂. Male lectotype here designated, one female paralectotype from Paltaypampa [1,860 m, Dpto. Junín, Prov. Tarma], Peru; two female paralectotypes from Amable María [3,800 m, Dpto. Junín, Prov. Tarma], Peru, (PAN), examined.

*Argyoepeira opulenta*:—Keyserling, 1893: 346, pl. 18, fig. 245, ♀, ♂.

*Chrysometa opulenta*:—Roewer, 1942: 913. Bonnet, 1956: 1083.

*Description.* Female from Amable María. Carapae, sternum, legs orange-yellow. Dorsum of abdomen evenly covered with large silver spots, about their diameter apart; venter with fewer spots. Posterior median eyes slightly smaller than others. Anterior median eyes 1.3 diameters apart, slightly less than two diameters from laterals. Posterior median eyes slightly more than their diameter apart, 1.6 diameters from laterals. Abdomen oval with slight anteromedian hump (Figs. 695, 696). Total length, 5.0 mm. Carapace, 1.9 mm long, 1.4 mm wide. First femur, 3.2 mm; patella and tibia, 3.7 mm; metatarsus, 3.4 mm; tarsus, 1.0 mm. Second patella and tibia, 2.4 mm; third, 1.3 mm; fourth, 2.2 mm.

Male from Paltaypampa. Coloration and structure like female. Chelicerae with hump below clypeus. Total length, 3.8 mm. Carapace, 2.0 mm long, 1.7 mm wide. First femur, 4.0 mm; patella and tibia, 4.8 mm; metatarsus, 4.9 mm; tarsus, 1.1 mm. Second patella and tibia, 2.9 mm; third, 1.4 mm; fourth, 2.3 mm.

*Variation.* Females vary in total length from 5.0 to 7.0 mm.

*Diagnosis.* The septum and transverse bar of the epigynum form a triangular, posteriorly directed swelling with a pair of depressions (Fig. 693). The paracymbium of the male palpus is similar but smaller than that of *C. universitaria* and *C. calima* but differs in lateral view by a slightly curved “lower” prong (Figs. 697, 698).

*Natural History, Distribution.* Low elevations to 3,800 m, Peru, Brazil (Map 4).

*Records.* PERU *Dpto. Huánuco*: Cucharas, Huallaga Valley, Feb.–April, 5♀, imm. (F. Woytkowski, EPC); Tingo María, numerous specimens (AMNH, CAS, MCZ). BRAZIL *Est. Goiás*: Faz. Cachveirinha, Jataí, Oct. 1962, ♀ (MZSP).

*Chrysometa tungurahua* new species  
Figures 699–702; Map 4

*Holotype.* Female from Baños, Prov. Tungurahua, Ecuador, 11 Feb. 1955 (E. I. Schlinger, E. S. Ross, CAS). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, sternum, legs orange-yellow. Dorsum of abdomen with scattered white pigment spots;

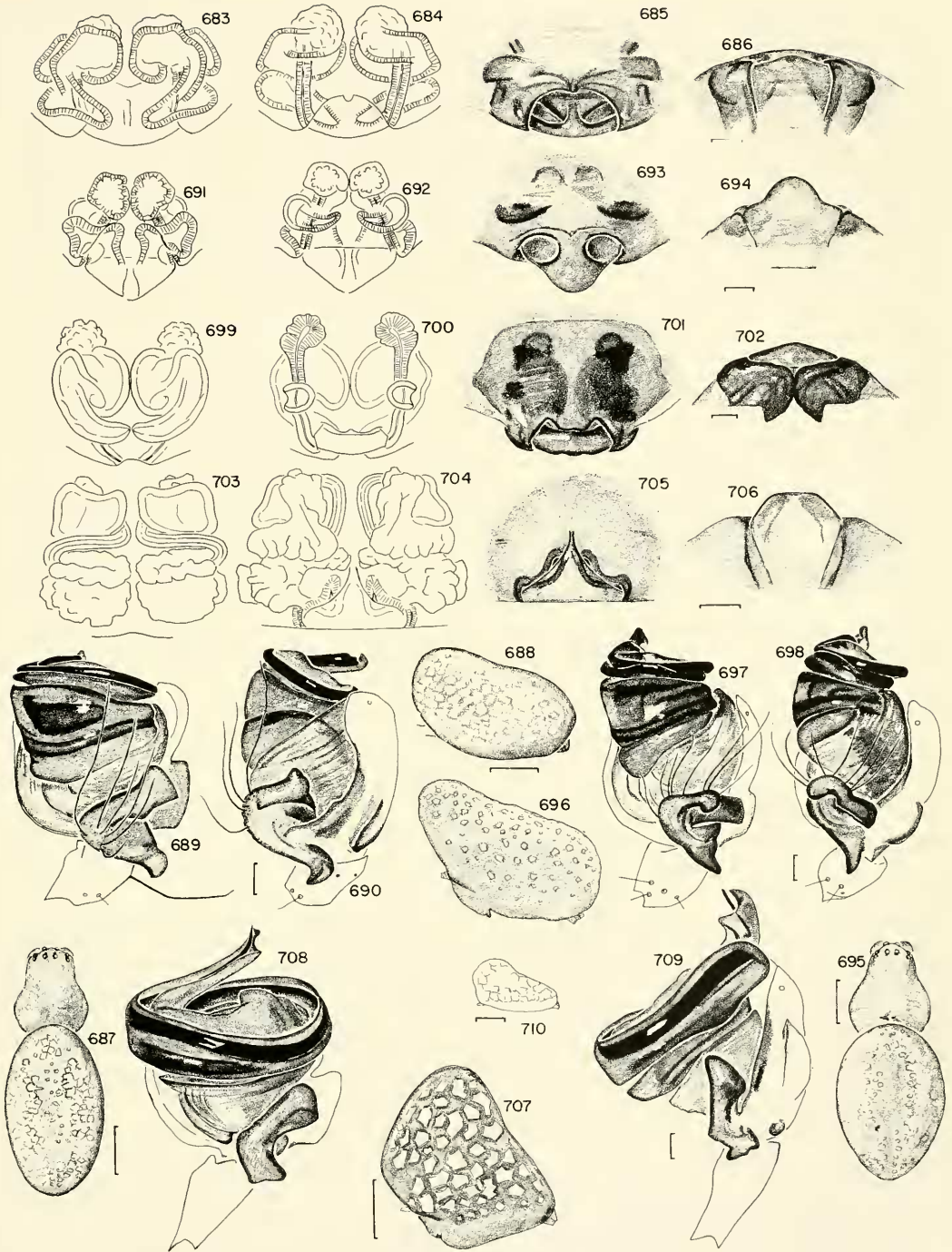
Figures 683–690. *Chrysometa calima* n. sp. 683–686. Epigynum. 683. Dorsal, cleared. 684. Ventral, cleared. 685. Ventral. 686. Posterior. 687. Female. 688. Female abdomen, lateral. 689, 690. Left male palpus. 689. Ventral. 690. Lateral.

Figures 691–698. *C. opulenta* (Keyserling). 691–694. Epigynum. 691. Dorsal, cleared. 692. Ventral, cleared. 693. Ventral. 694. Posterior. 695. Female. 696. Female abdomen, lateral. 697, 698. Male palpus. 697. Ventral. 698. Lateral.

Figures 699–702. *C. tungurahua* n. sp., epigynum. 699. Dorsal, cleared. 700. Ventral, cleared. 701. Ventral. 702. Posterior.

Figures 703–710. *C. bolivia* n. sp. 703–706. Epigynum. 703. Dorsal, cleared. 704. Ventral, cleared. 705. Ventral. 706. Posterior. 707. Female abdomen, lateral. 708, 709. Male palpus. 708. Ventral. 709. Lateral. 710. Male abdomen, lateral.

*Scale lines.* 0.1 mm, except Figures 687, 688, 695, 696, 707, 710, 1.0 mm.



venter without black band, with bare patch containing silver spots on each side. Anterior lateral eyes, posterior median eyes equal to 1.3 diameters of anterior medians; posterior lateral eyes equal to 1.2 diameters of anterior median eyes. Anterior median eyes their diameter apart, 0.5 diameters from laterals. Posterior median eyes 0.6 diameters apart, their diameter from laterals. Abdomen subspherical. Total length, 4.2 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 2.3 mm; patella and tibia, 2.7 mm; metatarsus, 2.0 mm; tarsus, 0.9 mm. Second patella and tibia, 2.1 mm; third, 1.1 mm; fourth, 1.6 mm.

*Diagnosis.* The epigynum of this species is distinguished by lacking a distinct septum, but having a transverse bar touched in the middle by a median lobe (Fig. 701).

#### *Chrysometa bolivia* new species

Figures 703–710; Map 4

*Holotype.* Female from Rurrenabaque, Dpto. El Beni, Bolivia, Oct.–Nov. 1956 (L. Peña, IRSNB). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, sternum yellowish; legs yellowish, black at distal ends of first tibiae, tarsi and metatarsi. Dorsum of abdomen with large silver patches, absent from venter (Fig. 707); venter with black marks on each side of spinnerets. Anterior lateral eyes, posterior median eyes equal to 1.2 diameters of anterior medians; posterior lateral eyes equal to diameter of anterior median eyes. Anterior median eyes slightly less than their diameter apart, 0.6 diameters from laterals. Posterior median eyes their diameter apart, same distance from laterals. Abdomen as high as long (Fig. 707) with two indistinct anterior humps and pointed posterior. Total length, 4.5 mm. Carapace, 1.8 mm long, 1.4 mm wide. First femur, 3.9 mm; patella and tibia, 4.8 mm; metatarsus, 4.4 mm; tarsus, 1.5 mm. Second patella and tibia, 2.9 mm; third, 1.5 mm; fourth, 2.4 mm.

Male from Bogotá, Colombia. Coloration like female, but silver spots on abdomen much closer together, almost touching. Eyes subequal in size. Anterior median eyes 0.7 diameters apart, 0.7 diameters from laterals. Posterior median eyes their diameter apart, same distance from laterals. Total length, 4.3 mm. Carapace, 1.9 mm long, 1.5 mm wide. First femur, 6.2 mm; patella and tibia, 7.8 mm; metatarsus, 8.6 mm; tarsus 1.6 mm. Second patella and tibia, 4.4 mm; third, 1.9 mm; fourth, 3.0 mm.

*Note.* The only collection other than the type were three female, one male paralectotypes of *Tetragnatha tenuipes* Keyserling from Bogotá, Colombia, perhaps an erroneous locality (BMNH).

*Diagnosis.* The epigynum has a triangular septum and transverse bar similar to *C. distincta* but is distinguished from *C. distincta* and *C. tenuipes* by the wavy diagonal lip of the openings on each side (Fig. 705). The male differs from all others by the long conductor and supporting structures and the minute tegulum (Figs. 708, 709).

#### *Chrysometa alajuela* new species

Figures 711–717; Map 4

*Holotype.* Female from Peñas Blancas, headwaters of Río Peñas Blancas, Prov. Alajuela, Costa Rica, 13 Aug. 1980 (J. Coddington, MCZ). The specific name is a noun in apposition after the locality.

*Description.* Female. Carapace, sternum, legs yellow; legs black on distal ends of tibiae. Dorsum of abdomen with gray marks and scattering of silver spots (Fig. 715); venter with pair of patches side by side behind epigynum, containing small silver spots. Lateral eyes equal to diameter of anterior median eyes; posterior medians 1.2 diameters of anterior median eyes. Anterior median eyes 0.8 diameters apart, 0.8 diameters from laterals; posterior median eyes 0.6 diameters apart, their diameter from laterals. Abdomen oval (Fig. 715). Total length, 5.0 mm. Carapace, 2.3 mm long, 1.8 mm wide. First femur, 2.7



mm; patella and tibia, 3.4 mm; metatarsus, 2.6 mm; tarsus, 1.2 mm. Second patella and tibia, 2.5 mm; third, 1.3 mm; fourth, 2.0 mm.

Male from Volcán, Panama. Coloration lighter than that of female (specimen recently molted). Anterior lateral eyes, posterior median eyes equal to 1.5 diameters of anterior medians; posterior lateral eyes equal to diameter of anterior median eyes. Anterior median eyes slightly more than their diameter apart, same distance from laterals. Posterior median eyes 0.6 diameters apart, 1.5 diameters from laterals. Abdomen oval. Total length, 3.5 mm. Carapace, 1.9 mm long, 1.6 mm wide. First femur, 2.9 mm; patella and tibia, 3.5 mm; metatarsus, 3.0 mm; tarsus, 1.1 mm. Second patella and tibia, 2.5 mm; third, 1.1 mm; fourth, 1.6 mm.

*Variation.* Other females were 4.2 mm total length.

*Note.* A male was collected with females.

*Diagnosis.* The epigynum, smooth in ventral view and extending posteriorly (Fig. 713), and the septum and transverse bar, visible only in posterior view (Fig. 714), distinguish *C. alajuela* from others. The shape of the large paracymbium of the male palpus (Figs. 716, 717) distinguishes the male.

*Natural History, Distribution.* Found at intermediate altitudes Costa Rica to southern Colombia (Map 4).

*Paratypes.* COSTA RICA *Prov. Cartago:* Turrialba, May 1944, ♀ (F. Schroeder, AMNH). PANAMA *Prov. Chiriquí:* Volcán, 2 March 1936, 2♀, ♂ (W. J. Gertsch, AMNH). COLOMBIA *Dpto. Valle:* Cent. Hid. del Río Anchicayá, 400 m, 1977, ♀ (W. Eberhard, MCZ).

### *Chrysometa heredia* new species Figures 718–724; Map 4

*Holotype.* Male holotype and one female paratype from Finca La Selva, near Puerto Viejo, Heredia Prov., Costa Rica, December 1980 (W. Eberhard,

MCZ). The specific name is a noun in apposition after the type locality.

*Description.* Female. Carapace, legs, sternum orange-yellow. Legs black on distal end of tibiae. Abdomen with silver spots, more than their diameter apart; venter without spots except indication of two lines of silver spots. Anterior lateral eyes equal to diameter of anterior medians; posterior median eyes equal to anterior medians; posterior lateral eyes 0.8 diameters of anterior median eyes. Anterior median eyes slightly less than their diameter apart, 0.7 diameters from laterals. Posterior median eyes slightly less than their diameter apart, slightly more than their diameter from laterals. Abdomen subspherical. Total length, 3.6 mm. Carapace, 1.9 mm long, 1.3 mm wide. First femur, 2.2 mm; patella and tibia, 2.6 mm; metatarsus, 2.1 mm; tarsus, 1.0 mm. Second patella and tibia, 2.0 mm; third, 0.9 mm; fourth, 1.7 mm.

Male. Color like female. Eyes subequal in size, except posterior laterals, 0.8 diameters of anterior medians. Anterior median eyes 0.8 diameters apart, 0.7 from laterals. Posterior median eyes 0.8 diameters apart, their diameter from laterals. Total length, 4.1 mm. Carapace, 2.2 mm long, 1.6 mm wide. First femur, 3.2 mm; patella and tibia, 3.9 mm; metatarsus, 3.2 mm; tarsus, 1.1 mm. Second patella and tibia, 2.9 mm; third, 1.3 mm; fourth, 1.9 mm.

*Note.* *Chrysometa heredia* has shorter legs than the sympatric *C. flava*.

*Diagnosis.* The epigynum is distinguished by the septum forming a T within a frame and being broken before meeting the transverse bar. The bar forms a posterior lip (Figs. 720–722). The male palpus has the embolus moved laterally on the tegulum (Fig. 723, 724), and the paracymbium is heavily sclerotized and almost round in lateral view. The palpus resembles that of *C. alajuela* except for having a thicker embolus and more compact paracymbium (Figs. 723, 724).

*Paratypes.* Ten collections from type locality, 8♀, 3♂ (J. Coddington, W. Eberhard, no. TL 33-5, TL 53-5, distributed: MCZ, AMNH, BMNH, USNM, SMF).

*Chrysometa jordao* new species  
Figures 725–728; Map 4

*Holotype.* Female from Campos do Jordão, Est. São Paulo, Brazil, 3 Jan. 1948 (F. Lane, MZSP). The specific name is a noun in apposition after the locality.

*Description.* Female. Carapace orange, head brown between lateral eyes and thoracic depression, enclosing two pairs of lighter orange areas; rim of thorax brown. Labium, endites, sternum dark brown; legs indistinctly ringed brown on orange. Dorsum of abdomen with tiny white spots posteriorly, scattered black spots anteriorly, transverse black marks and spots posteriorly; sides with reticulated gray marks; venter with rectangular black mark limited on each side by light longitudinal band of silver spots. Eyes subequal in size. Anterior median eyes slightly less than their diameter apart, same distance from laterals. Posterior median eyes 0.7 diameters apart, 1.2 diameters from laterals. Abdomen oval, wider anteriorly than posteriorly. Total length, 7.7 mm. Carapace, 3.2 mm long, 2.5 mm wide. First femur, 5.1 mm; patella and tibia, 6.5 mm; metatarsus, 5.6 mm; tarsus, 1.5 mm. Second patella and tibia, 4.7 mm; third, 2.3 mm; fourth, 3.4 mm.

*Variation.* A second specimen is 6.5 mm total length.

*Diagnosis.* The epigynum is distinguished by a pair of deep depressions separated by a very narrow septum and a transverse bar that forms a posterior lip of the depression (Fig. 727).

*Paratypes.* BRAZIL *Est. São Paulo:* Campos do Jordão, March 1945, ♀ (P. Wygodzinsky, MZSP).

*Chrysometa churitepui* new species  
Figures 729, 730; Map 4

*Holotype.* Male from Churitepui, 1,000 m [Churitepui], Est. Bolívar, Venezuela, Feb 1935 (AMNH).

The specific name is a noun in apposition after the type locality.

*Description.* Male. Carapace orange, head darkest; sternum orange; legs orange, indistinctly ringed. Dorsum of abdomen with longitudinal band, wider anteriorly than posteriorly, of black shoulder patches and black transverse bars, with silver spots along its sides and behind shoulder patches; sides dusky with a silver stripe; venter dusky on orange, with a round silver patch on each side closer to genital groove than to spinnerets. Anterior lateral eyes, posterior median eyes equal to 0.7 diameters of anterior medians; posterior lateral eyes equal to 0.6 diameters of anterior median eyes. Anterior median eyes their diameter apart, 0.6 diameters from laterals. Posterior median eyes 0.7 diameters apart, 1.5 diameters from laterals. Abdomen oval. Total length, 5.4 mm. Carapace, 2.9 mm long, 2.5 mm wide. First femur, 5.8 mm; patella and tibia, 7.4 mm; metatarsus, 7.5 mm; tarsus, 2.0 mm. Second patella and tibia, 4.3 mm; third, 1.8 mm; fourth, 2.9 mm.

*Diagnosis.* The palpus differs from that of *C. heredia* and *C. alajuela* by having the paracymbium in lateral view project ventrally and having the proximal end of the cymbium more dissected (Figs. 729, 730).

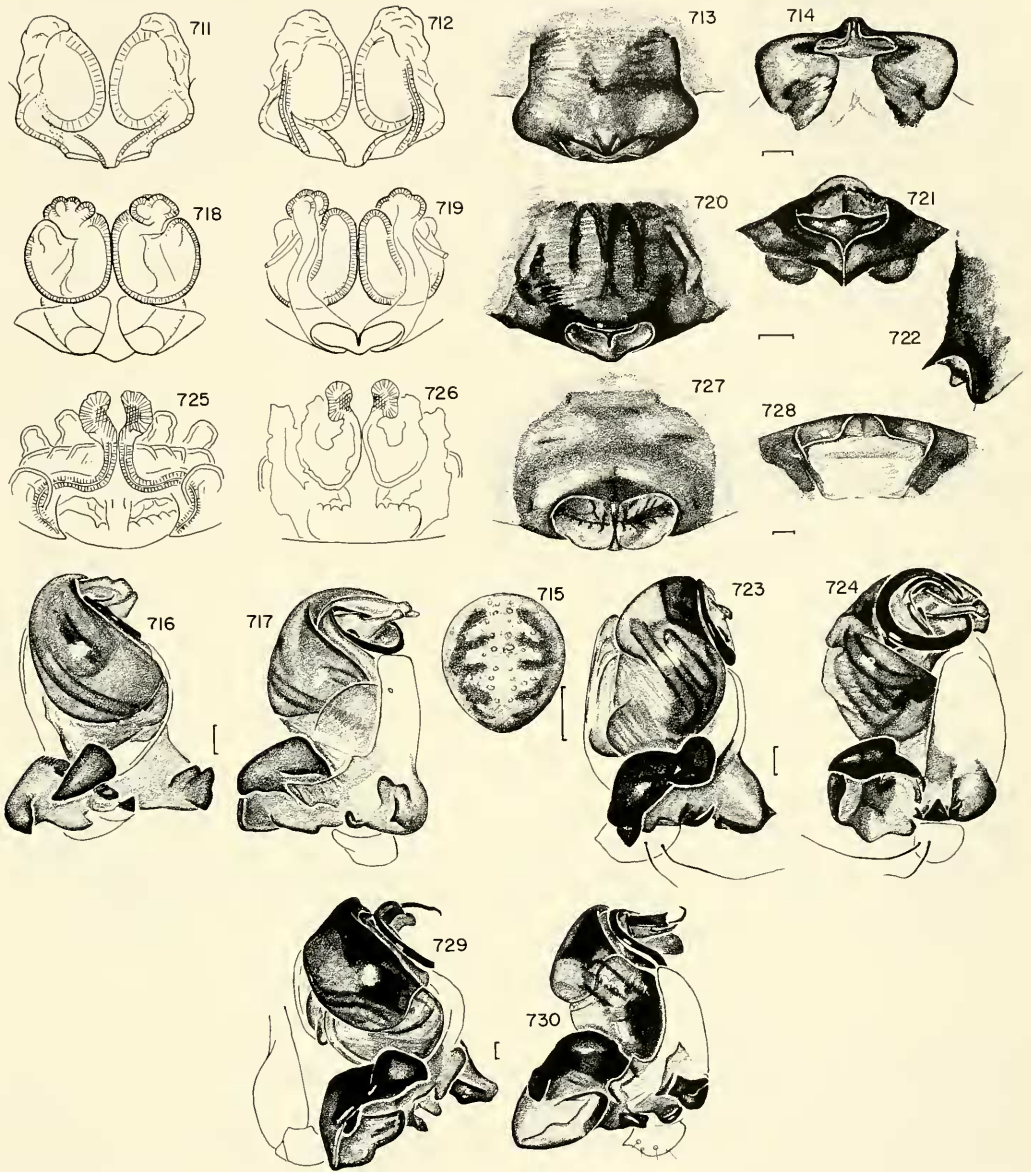
*Homalometa* Simon

*Homalometa* Simon, 1897: 872. Type species *H. nigritarsis* Simon by monotypy.

*Diagnosis.* *Homalometa* differs from *Chrysometa* and other metines by a male palpus that has a modified, lobed and narrow cymbium and lacks a paracymbium (Figs. 735–739), and by the palpal tibia having a projection (Figs. 735–737).

Females differ by having an epigynum with a transverse swelling (Figs. 731, 747). The chelicerae of *Homalometa* have only two or three teeth on the posterior margin, whereas *Chrysometa* has four.

*Description.* Carapace, sternum, legs brownish-yellow. Abdomen covered by



Figures 711-717. *Chrysometa alajuela* n. sp. 711-715. Epigynum. 711. Dorsal, cleared. 712. Ventral, cleared. 713. Ventral. 714. Posterior. 715. Female abdomen, dorsal. 716, 717. Left male palpus. 716. Ventral. 717. Lateral.

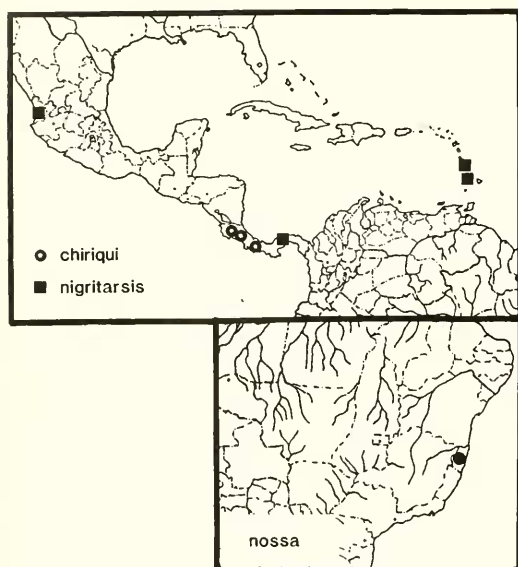
Figures 718-724. *C. heredia* n. sp. 718-722. Epigynum. 718. Dorsal, cleared. 719. Ventral, cleared. 720. Ventral. 721. Posterior. 722. Lateral. 723, 724. Male palpus. 723. Ventral. 724. Lateral.

Figures 725-728. *C. jordao* n. sp., epigynum. 725. Dorsal, cleared. 726. Ventral, cleared. 727. Ventral. 728. Posterior.

Figures 729, 730. *C. churitepui* n. sp., male palpus. 729. Ventral. 730. Lateral.

Scale lines. 0.1 mm, except Figure 715, 1.0 mm.



Map 5. Distribution of *Homalometa* species.

white pigment spots except around pedicel, epigynum and spinnerets (Fig. 734).

The carapace is narrow in front, the thoracic depression indistinct. The eyes are subequal in size, the anterior eyes slightly closer to the laterals than to each other, the posterior eyes equally spaced. The lateral eyes on each side touch. The height of the clypeus equals one to two diameters of the anterior median eyes.

The chelicerae have three teeth on the anterior margin, some denticles proximally, two or three on the posterior. The male chelicerae are narrower and slightly longer than those of the female. The first leg is longest, the second slightly longer than the fourth, the third shortest. The abdomen is subspherical.

**Genitalia.** The female epigynum has a transverse swelling with an opening on each side (Figs. 731, 732). There is one pair of seminal receptacles with fertilization ducts that originate medially (Fig. 732). Out of each opening hangs a sclerotized oval balloon-shaped structure, probably a sclerite, left by the male's pal-

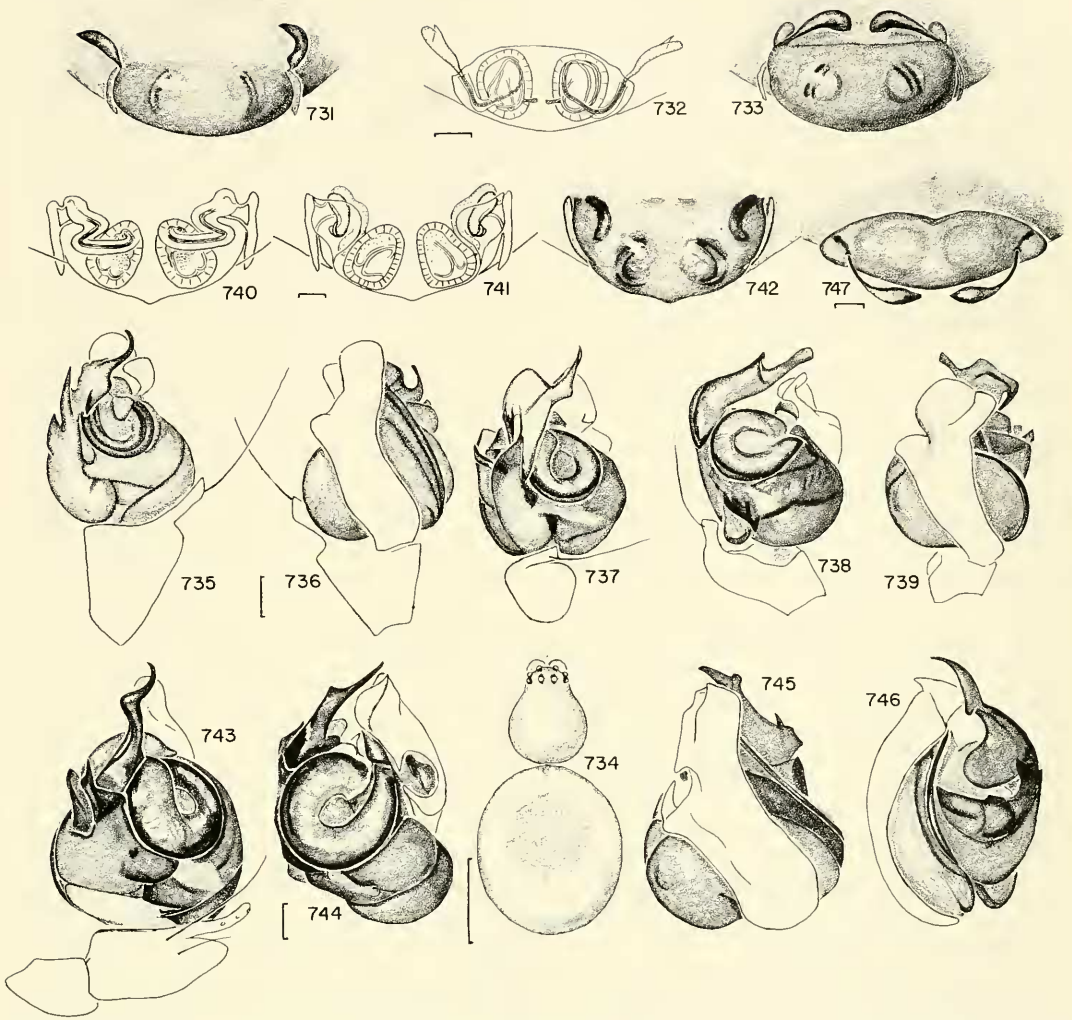
pus. If cleared, these structures continue as a double duct and coil inside the seminal receptacles. Inside the seminal receptacles the two parts of the duct appear separated (Figs. 732, 740, 741). In the epigynum of *H. chiriqui*, these probable male structures are hidden in lateral pockets (Figs. 741, 742). Also on the sides hang whitish tubes (Figs. 731, 733, 747) that probably come from the male as well. Are they spermatophores?

The narrow cymbium has lobes (Figs. 736, 745), but no paracymbium. The apical transverse projection (Figs. 738, 744) of the palpus appears to be the conductor, and the embolus seems wrapped in the terminal apophysis. The palpal tibia has a projection (Figs. 735, 743).

**Natural History, Distribution.** A specimen of *H. chiriqui* was "collected to the side of orb—both specimens with a set of eggs under a leaf; in the orb at night (esp. dusk)" next to a stream in mountain forest (R. Buskirk letter, 27 June 1971). The type specimen of *H. chiriqui* came probably from a mud-dauber nest, and the large number of specimens available to Simon of *H. nigritarsis* may also have come from a mud-dauber nest.

#### KEY TO *HOMALOMETA* SPECIES

1. Males ..... 2
- Females ..... 3
- 2(1). Palpal tibia wider than long with a pointed lateral projection below spur (Fig. 743); Costa Rica, Panama ..... *chiriqui*
- Palpal tibia longer than wide, without lateral projection below spur (Fig. 735); Lesser Antilles, Mexico to Panama ..... *nigritarsis*
- 3(1). Openings of epigynum inside pockets on each side of swellings (Figs. 740-742); Costa Rica, Panama ..... *chiriqui*
- Openings of epigynum anterior or posterior on surface of swelling ..... 4
- 4(3). Openings of epigynum facing posterior with visible portion of connecting duct anterior of opening (Fig. 747); south-eastern Brazil ..... *nossa*
- Openings of epigynum facing anterior with connecting duct, if visible, behind openings (Figs. 731, 733); Lesser Antilles, Mexico to Panama ..... *nigritarsis*



Figures 731–739. *Homalometa nigritarsis* Simon. 731–733. Epigynum. 731, 733. Ventral. 732. Dorsal. 734. Female. 735–739. Left male palpus. 735, 737. Ventral. 736, 739. Dorsal. 738. Lateral. 731, 735, 736. (Syntypes). 732, 733, 737–739. (Panama).

Figures 740–746. *H. chiriqui* n. sp. 740–742. Epigynum. 740. Dorsal, cleared. 741. Ventral, cleared. 742. Ventral. 743–746. Male palpus. 743. Ventral. 744. Lateral. 745. Dorsal. 746. Mesal.

Figure 747. *H. nossa* n. sp., epigynum, ventral.

Scale lines. 0.1 mm, except Figure 734, 1.0 mm.

### *Homalometa nigritarsis* Simon Figures 731–739; Map 5

*Homalometa nigritarsis* Simon, 1897: 872. Eight female, one male, 9 immature, syntypes in poor con-

dition from St. Vincent Island, Lesser Antilles (BMNH) and female syntypes (MNHN), examined. Roewer, 1942: 914. Bonnet, 1957: 2230.

*Description.* Female. Carapace, ster-

num, legs yellowish. Abdomen with white pigment, center of dorsum without pigment (Fig. 734). Anterior median eyes twice their diameter apart, their diameter from laterals. Posterior median eyes 1.3 diameters apart, same distance from laterals. Abdomen subspherical. Total length, 3.0 mm. Carapace, 1.2 mm long, 0.9 mm wide. First femur, 1.3 mm; patella and tibia, 1.6 mm; metatarsus, 1.2 mm; tarsus, 0.6 mm. Second patella and tibia, 1.4 mm; third, 0.9 mm; fourth, 1.4 mm.

Male. Color like female. Anterior median eyes two diameters apart, 0.5 diameters from laterals. Posterior median eyes 1.5 diameters apart, one diameter from laterals. Clypeus height equal to two diameters of anterior median eyes. Total length, 1.5 mm. Carapace, 0.78 mm long, 0.78 mm wide. First femur, 1.1 mm; patella and tibia, 1.4 mm; metatarsus, 0.9 mm; tarsus, 0.5 mm. Second patella and tibia, 1.2 mm; third, 0.7 mm; fourth, 1.1 mm.

*Variation.* Total length of females varies from 2.5 to 3.3 mm. The Central American spiders lack the bald dorsal spot on the abdomen and are evenly covered by pigment.

*Note.* The male syntype is an individual just before a molt or just after (Figs. 735, 736). A second male from Panama has only one palpus which is slightly expanded (Figs. 737-739).

*Diagnosis.* The epigynum differs from that of *C. chiriqui* and *C. nossa* by having the openings lateral on each side, with palpal parts hanging in an anterior direction (Figs. 731-733).

*Records.* MEXICO *Est. Nayarit*: Tepic, 15 Sept. 1953, ♀ (B. Malkin, AMNH). PANAMA *Panamá*: Barro Colorado Isl., Gatun Lake, 20 Apr. 1953, ♂ (A. M. Nadler, AMNH); 1-6 Aug. 1959 (A. M. Chickering, MCZ). LESSER ANTILLES *Martinique*, 1967, 5♀ (Beatty, AMNH).

### *Homalometa chiriqui* new species

Types 740-746; Map 5

*Holotype.* Female holotype, 3♀, 1♂, imm. paratypes from El Volcán, Prov. Chiriquí, Panama, 9-14 Aug.

1950 (A. M. Chickering, MCZ). The name is a noun in apposition after the Indian tribe and name of the province.

*Note.* The type specimens have an insect larva on each abdomen. The collection probably came from a mud-dauber nest. The male has only one palpus and has the palpal tibia separated from the cymbium and bulb, although they were placed together in Figures 745, 746.

*Description.* Female. Carapace, sternum, legs orange-white; abdomen and dorsum covered with white pigment spots which touch each other; no spots around pedicel and spinnerets. Narrow canoe-shaped tapetum of posterior median eyes shifted toward median of spider. Anterior median eyes 1.8 diameters apart, 1.5 diameters from laterals. Posterior median eyes 1.3 diameters apart, 2 diameters from laterals. Clypeus height equal to 1.7 diameters of anterior median eyes. Chelicerae with three teeth on posterior margin, the middle one small, many denticles in groove. Abdomen oval. Total length, 4.0 mm. Carapace, 2.0 mm long, 1.5 mm wide. First femur, 2.7 mm; patella and tibia, 3.5 mm; metatarsus, 2.8 mm; tarsus, 1.2 mm. Second patella and tibia, 2.7 mm; third, 1.7 mm; fourth, 2.4 mm.

Male. Color like female, but sternum darker and venter of abdomen dusky, except for a pair of white spots side by side behind epigastric furrow. Secondary eyes slightly smaller than anterior medians. Anterior median eyes 1.6 diameters apart, more than their diameter from laterals. Posterior median eyes 1.6 mm apart, 2 diameters from laterals. Clypeus height equal to almost twice diameter of anterior median eyes. Chelicerae oval with three teeth on anterior margin. Abdomen oval. Total length, 2.9 mm. Carapace, 1.6 mm long, 1.3 mm wide. First femur, 2.1 mm; patella and tibia, 2.7 mm; metatarsus, 2.3 mm; tarsus, 0.8 mm. Second patella and tibia, 2.1 mm; third, 1.3 mm; fourth, 1.7 mm.

*Variation.* Total length of females varies from 4.0 to 5.8 mm.

*Diagnosis.* The epigynum of this species



differs from that of *H. nigratarsis* by having the openings inside pockets on each side of a swelling (Figs. 740–742). The male palpus differs from others by having a tibia that is wider than long (Fig. 743), and by being larger in size (Figs. 743–746).

*Natural History, Distribution.* Specimens were collected to the side of orb (see above), Costa Rica to Panama.

*Paratypes.* Specimen from type collection placed in MIUP and AMNH. COSTA RICA. *Prov. San José:* Bajo La Hondura, 1,600 m, Oct. 1982, ♀ (W. Eberhard TL 40–3, MCZ). *Puntarenas:* Monteverde, 1,380 m, river edge and forest, 21 June 1971, 2♀ (W. R. Buskirk, MCZ); Dec. 1971, ♀, imm. (W. R. Buskirk, USNM).

*Homalometa nossa* new species  
Figures 747; Map 5

*Type.* From Fazenda Nossa Senhora das Neves, Itamarajú, cacao plantation, Est. Bahia, Brazil, 9 Oct. 1978 (J. S. Santos, no. 11022, MCN). The specific name is a noun in apposition after the type locality.

*Note.* Specimen shriveled, in poor condition.

*Description.* Female. Carapace, clypeus, labium, sternum, legs brownish-yellow. Abdomen covered by white pigment spots except anterior of spinnerets and around pedicel. Anterior median eyes more than twice their diameter apart, their diameter from laterals. Posterior median eyes twice their diameter apart, same distance from laterals. Chelicerae with two teeth on posterior margin. Abdomen oval. Total length, 3.5 mm. Carapace, 1.4 mm long. First femur, 2.3 mm; patella and tibia, 2.8 mm; metatarsus, 2.3 mm; tarsus, 0.9 mm. Second patella and tibia, 2.3 mm; third, 1.3 mm; fourth, 2.1 mm.

*Diagnosis.* This species differs from *H. nigratarsis* by having longer legs and the openings of the epigynum more posterior (Fig. 747).

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